MACRO ECONOMIC FACTORS AND ITS IMPACT ON CAPITAL MARKET MOVEMENTS: A STUDY OF NIFTY-50

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(Including Languages)

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CERTIFICATE

Certificate of the Supervisor

This is to certify that the work entitled**" Macro Economic Factors and its Impact on Capital Market Movements: A study of Nifty-50"** is a piece of research work done by Dr. Tripti Tripathi, under my supervision, for Dr. S. Radhakrishnan Post Doctoral Fellowship in Humanities and Social Sciences (Including Languages), University Grants Commission the research center was School of Studies in Management, Jiwaji University, Gwalior (M.P.), India. The candidate has put in full attendance with us. To the best of our knowledge and belief, the research report:

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I declare that the research report entitled " Impact of Macro Economic Variables and Its Impact on Capital Market Movements: A Study of Nifty -50" is my own research work, conducted under the supervision of Prof. UmeshHolani, at School of Studies in Management, Jiwaji University, Gwalior (M.P), approved by the University Grants Commission, New Delhi. I have put in the full attendance with the supervisor at the School of Studies in Management, Jiwaji University, Gwalior (M.P.).

I further declare that to the best of my knowledge, the research work does not contain any part of any work, which has been submitted for the award of any degree, either in this University or in any other University/Deemed University, without proper citation.

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DEDICATED TO MY MOTHER

Mrs. Abha Sharma

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CHAPTER-1
INTRODUCTION

1.1.1 Theoretical Background

Recent demonetization in Indian Economy and Money Supply fluctuations resulting into changes in macro-economic factors in the range of increasing trades and financial liberalization have involved a huge deal of interests from both economists and policy maker. The relationship among the share markets return and fundamentals of economic activity in U.S is stated (Fama, 1970, 1990, 1991). Various study's (Chen, 1991; Chen et al., 1986; Fama, 1991; Huang & Kracaw, 1984; Pearce & Roley, 1988; Wei &Wong, 1992) modelled the relations among assets price as well as economic activity for rate of growth, rate of productions, rate of growth in national product, level of employment, yield spread, rates of interest, rates of inflation, yield of dividend etc. An investment theory "efficient market hypothesis" state that it's not possible to "beat the market" as stocks market efficiencies cause existing share price to always incorporate and show all relevant informations.

Though, the economic role of stocks market in relatively less developed Asian country like India is less known.(Praphan 2000, 2001) Typically how does the developing market react to change in the basic macro-economic variable and consequently resulting into what kind of impact does these macro-economic factors have on less developed economy. The study has investigated the casual relationships among the share prices & selected macro-economic variable for 20 years, ranging from 1999-2019.

The significance of capital market can't be over stated. By decreasing the costsof mobilizing saving, the share market may accelarate investments in useful technology. Share markets shall enhance capital allocations by allowing the implementations of longer term project with longer term pay off. Additionally, the share markets provide market liquidity's which allow investor trading in financial asset in riskless way and at the same time allows the company's to enjoy ease of accessibility towards capital. Corporate governance problem can be improved by developing the share markets by focusing the attention on principal agents problems. Share market get aligned itself towards the interests of the manager & owner and therefore motivates the manger

& owner to maximize the value of the firm. Moreover, international risk sharing is done by develop share market and so it allows the world portfolio to move from safe low returns capital to risky high return capital (Jensen and Murphy, 1990; Levine, 1991; Obstfeld, 1994; Bencivenga *et al.*, 1996; Greenwood and Smith, 1997).

Development of any nation is indicated by its financial factor and this decides the future of its investment. In any nation the process of determining the prices is influenced by the financial factor. Price mobility is caused by not having good understanding of the financial factor which affect the stock's & commodities' markets. The share market promote the economic development of the industries which are in need of finance for their expansion purpose by pooling of the huge & long-term capital by issuing share & stock and various other equities. Therefore, the holistic development of any nation's economy forms the basis for performance of the share market & it is been proved from previous studies that growth of stock market is very significant for the development of an economy. Although their exist the relations among the share market growth & development of the economy and it is commonly believed that the share prices have the influence of the various financial factors. Empirical evidence shows that change in the share price are having linkages with the financial behavior in the advance countries.

1.1.2 Meaning of Capital Market

Normally, capital market is assumed to be a marketplace for long-term fund. The long term requirements of funds of government, trade & commerce is fulfilled by this market. The availability of long term funds is done through debenture, preference share & common share. The stock market could be at local, regional, national & international levels

1.1.3 Definition of Capital Market

The term 'capital/security market' refers to the institutional arrangements for facilitating borrowings and lending's of long-run funds. Broadly, it is composed of wide range of channelby which community's saving are provided to the industries, commercialized companies and other public authorities.

It is concerned with those private savings, individuals as well as corporate, that are into investment through new capital issues and also through new public loans floated by government and semi government bodies.

1.1.4 Objectives of Capital Markets

An efficient capital/security market is pre-requisite of economic development. Organized & well developed capital markets operates in the free market economy's,

(i) to ensure the best coordination and balance among the flows of saving & the flows of investments that leads to the formation of capital;

(ii) to direct the flows of saving in the channel that is most profitable and therefore ensure optimal utilization of financial resource.

1.1.5 Function of Capital Market

The major function performed by capital/security market are:

a. Mobilization of financial resource on a nationwide scales.
b. To secure the foreign capital & know how to make-up the deficits in the required resource for economic development at the fast pace.
c. Efficient utilization of the mobilized financial resource, by giving directions to the project with the high yield.

1.2 Introduction of Primary Market

The market that deals with the issue of new securities is known as capital market. Any company, government or any institution of public sector can raise funds by selling new shares and bonds. This can be done by forming a syndicate of security traders. When the new issue is sold to investor is known as underwriting. When new issue is offered, that sale is known as IPO, although this could be seen in prospectus.

1.2.1 Definition of Primary Market

The new issue markets represent the primary markets where new share & bond are issued for the very first time. All the companies i.e. new & old could raise the capital from this market. The basic functions of the new issue market are facilitating the transfer of fund from the willing investor to the entrepreneur that sets up new corporates, enterprise or want to expand, diversify or modernize. Apart from granting help to the new business in getting their funds, it also channelize the saving of the individual in investment.

1.2.2 Features

- It is a market for the long-term. In this markets the security's are sold for the first time so it is also called New Issue Market.
- When the company's issue their primary issue it issued directly to the investor by the issuing company.
- The company issuing the securitiy's receive money & issues share certificate to the investor.
- This market help by providing and channelizing capital in an economy.
- The primary markets do not includes any other source for raising any funds of long-term.

1.2.3 Primary Market Instruments

Primary market is a market for raising long term sources of finance by the issue of new corporate securities. The corporate securities that are dealt in the primary market can be classified under two categories.

a. Ownership Securities or Capital Stock
b. Creditor ship Securities or debt Capital

1.2.4 Classification of Security Buyers

The various

s buyers of corporate securities include individuals, speculators, joint-stock companies, life insurance companies commercial banks, public provident funds, underwriters, trustees, investment bankers. Thus we can broadly classify investors into three categories:

a. Individual Investors
b. Joint – Stock Companies
c. Institutional Investors

a. Individual Investors

The savings of the individuals are the ultimate source of investment in corporate securities. According to an estimate the number of individual investors in shares was 4.87 lakhs in 1959, 10.65 Lakhs in 1980 and about 100 Lakhs in 1989. The number of individual investors has been increasing over time at the end of 1994, it was well above 200 Lakhs. In spite of increase in number, the investor as a percentage of total population have remained negligible in India compared to other countries like U.S.A., Germany and U. K

b. Joint Stock Companies

After individuals, the joint stock companies are the next important group of investors in the corporate securities. According to the recent study of Industrial Development Bank of India (IDBI) the shares of joint stock companies in the total paid up capital of the private sector was 31 percent. But their share in the investor's world has been declining over the years. The ownership of securities by the joint stock companies is in a way indirect rather than direct ownership of securities by the individuals.

c. Institutional Investors

The institutional investors have emerged as the most important group of investors in the corporate securities. The various institutional investors may be classified into three categories;

(i) private institutional investors

(ii) public financial institutions

(iii) foreign institutional investors

Private institutional investors include on the one hand institutions, such as life Insurance Companies (LIC), Investments Trusts. U.T.I., Commercial Banks, PPFs, etc., which invest their own funds; and on the other those which invest on behalf of their clients or their own funds for short term. The second type of private institutional investors include Underwriters. Issue houses, Investment Bankers and trustee Companies

1.3 Introduction of Secondary Market

The secondary-markets are the financial-markets for doing trade in security's which are already issued as a private or public offering. Conversely, secondary-markets could be referred to as a market of any type of used good. The markets that exist for one security just after the new-issue is known as aftermarket. As soon as a new-issue security gets listed in a stock-market, it becomes convenient for the investor & speculator for trading in that security because market maker provides bid & offer in new security.

1.3.1 Definition of Stock Exchanges

The stock exchange was a market place physically. There the agents of seller & buyer operate in it with the method of auctions. Later they were changed with electronic exchange where buyer and seller gets to connect only with the help of computer or with the help of telecommunication networks. Screen based system of trade was given way by the auctions trade. In screen based system bid price & offer price were used to get display on the computer's screens. The price at which an investor is ready to purchase the securities is known as bid price and the price at which an investor is ready to sell the securities is known as offer price.

1.3.2 Characteristics of Stock Exchanges

Characteristics of Stock Exchanges are as follows:

a. The place for purchasing and selling of securities.
b. Stock exchange whether incorporated or not incorporated is the associations of person.
c. Trade in stock exchanges are monitored and regulated and various rules, guidelines and regulation are to be followed for varied transactions.
d. Purchasing and selling of securities are done by both i.e. genuine investor & speculator.
e. Stock exchange deals with various security of corporation, trust, government and Municipal Corporation etc.

1.3.3 History of Stock Market

France, in twelfth century all the debts of agriculture communities were managed and regulated by the banks this was known as "courratiers de change". They were also known as first broker as they were trading in debt.

In 12th century France the *courratiers de change*were concerened with managing and regulating the debts of agricultural on the behalf of the banks. As these men also traded in debts, they could be called the first brokers.

Some story suggested that the origin of the word "bourse" came from the latin bursa, which means 'a bag' as in thirteenth century Bruge were the sign of a purses that were hanged in the houses front side where merchant does their meetings.

Although, the commodity's traders in thirteenth century gather in the house of a man known as 'Vander Burse' and then it got institutionalized till now and all the meetings done informally came to be known as "Burges Bourse" which then open in Ghent & Amsterdam.

Venetian's banker started trading in government's security during thirteenth century. During 1351 the government of Venetian banned the spread of rumor which were done to low down the prices of the government's fund.

As these cities were not ruled by the duke but by some influencing citizen's council so this could be made possible. In 1602, the Dutch East India company has made its first issue of share on Amsterdam Stock Exchange. This company was the first company to issue shares & bond. The trade started in 1688 in London's stock exchange.
In the year 1790, in Philadelphia the first stock exchange was found. After two years some merchant did a meeting to debate about the share business, then twenty four men found New York Stock exchange. While in 1817 merchants group understood their stock exchange is not in

good state and send representatives to Philadelphia to understand the working of stock exchange. Afterwards the New York Stock exchange came into existence formally.

Then a shop was started on wall street. Then it started with the business and started earning billions of dollars. In 1900, very huge profits were made but the period of profit making or boom cannot last long. So in 1929 share market crashed and the economy has to face the so called "Great depression."

Boom cannot last for long in the market, this is now understood by the powers but very little publically has this view, they choose that the market should be the own judge. Finally, many people lost their money.

In 1929, it was just the beginning of the share market crashes and the sorrows begin to enter the Wall street. The market started the recovery for a short duration, the market's excess the crashes in 1920 again. Again in 1987, the share market crashed again, that saw the Dow Jones suffer which was the highest single day loss in the history of stock market.

Later, industries and government are trying to put measure instead of curtailing, if they can't eliminate the likelihood of such crash. Therefore, it is necessary to provide safety so that risk gets reduced for such crashes as stock-market is an integral portion of the global economy. Though efforts are always made for risk reduction but there exist always a possibility of market crash.

1.3.4 Functions of Stock Exchanges

Stock exchanges have significant roles to play in the growth of an economy. They are necessary for the flawless performance of the private sector's corporate economy. During the processes of the capital formation and for raisings resources for the corporate sectors, the stocks exchanges performs 4 necessary function.

First, it provide a place (market) for buying and selling of security viz. share, bond and debenture etc. The interested investors who wish to buy security can purchase it from private market rarely

i.e. only when the company's issue securities for the first time while they can purchase the security from securities stock exchange any time they wish because trading in stock exchange is ongoing. In the same way the security holders who wants to sell off their security can do so through the medium of stock exchange as buying back of shares is not done in ordinary way. The ongoing trading process is possible only because of stock exchanges.

Second, securities stocks exchanges also help in providing liquidity to liquidity to investment in security, it helps the stock holder to liquidate the holding. Stock exchanges are essentially needed for the joint-stock companies as the investor are interested in investing in corporate-security without the guarantee provided by the stocks exchange to the owner of the corporate security that these security can be sold in stocks exchange any time.

Third, the stocks exchange help in the valuations of security's by giving the markets quotation of share price. These markets quotations signify the total judgments for the value of security calculated together by many seller and buyer in the markets. The price of the shares is influence by macro variables as well as micro variables trend (long and short term) etc. The speculation in security also have an impact on the share value.

Fourth, for any economy stocks exchange plays a significant role as it signify the financial and economic health of a nation. The index of share market represents the stock markets as a whole. As any movement in the various factors of the economy influences the share prices or the index of stocks market which is indicative of the economic and financial health of an economy. Stocks exchanges act as a link between savings and investments by mobilizing the saving and channelizing them in the corporate sectors.

1.3.5 History of Stock Exchanges in India

Work of stock exchange started in India in the year 1875. The oldest stock market of India is Bombay Stock Exchange. The India's stock market started with 318 person who took the membership of Native Share & Stock Broker Association which later came to be known as Bombay Stock Exchange. Later, during 1965 government of India gave the permanent recognition as Bombay Stock Exchange. National stock exchange is 2nd to Bombay stock exchange in popularity. Stock market of India is represented by BSE and NSE. The share market of India's history is same as the Bombay Stock exchange's history.In 1986, Sensex (thirty stock sensitive index) was first compiled. On the basis of 30 financially sound companies Sensex is compiled.

After US, India host the longest numbers of listed companies. Now India is chosen by the international investors for their investments. Now, middle class people of India also find share market attractive which was previously viewed as skepticism. The people from India who are working abroad also channelize their saving to stock. As the interest rate of bank has decreased and online trade has now started so the current scenario is due to this. To fulfill the needs of NRI's share brokers have now started to open up the offices abroad. They can purchase or sell off their holdings after they return from their workplace as time factor also work for non resident Indians.

1.3.6 National Stock Exchange in India

There are two national level stock exchange in India:

a. Bombay Stock Exchange
b. National Stock Exchange

a. Bombay Stock Exchange

Bombay Stock exchange is the oldest stock exchange in Asia with a rich heritage. Popularly known as "BSE", it was established as " The Native Share and Sock Brokers Association" in 1875. it is the first stock exchange in the country to obtain permanent recognition in 1956 from Government of India under the securities contracts (Regulation) Act, 1956. the exchange pivotal and pre-eminent role in the development of Indian capital market is widely

recognized and its index, SENSEX is tracked worldwide. Earlier an associations of persons (AOP), the exchange is now demutualized and corporatized entity incorporated under the provisions of companies act, 1956, pursuant to the BSE (Corporatization and Demutualization) scheme, 2005 notified by the securities and exchange board of India (SEBI)

With demutualization, the trading rights and ownership rights have been de-linked effectively addressing concerns regarding perceived and real conflict of interest. The exchange is professionally managed under the overall direction of the board of Directors.

b**. National stock Exchange**

In the fast growing Indian financial market, there are 23 stock exchanges trading securities. The National Stock Exchange of India (NSE) situated in Mumbai- is the largest and the most advanced exchange with 1016 companies listed and 732 trading members.

The NSE is owned by the group leading financial institutions such as Indian Bank or Life Insurance Corporation of India. However in totally de-mutualiesd Exchange, the ownership and the management does not have a right to trade on the exchange. Only qualified traders can be involved in securities trading.

The NSE is one of the few exchanges in the world trading all types of securities on a single platform, which is divided into three segments: wholesale Debt Market (WDM), Capital market (CM), and futures and options (F&O). each segment has experienced a significant growth throughout a few years of their lunch. While the WDM segment has accumulated the annual growth of over 36% since its opening in 1994, the CM segment has increased by even 61% during the same period.

The National Stock Exchange of India has stringent requirements and criteria for the companies listed on the exchange. Minimum capital requirements and the criteria for the companies listed on the stock exchange. Minimum capChuital requirements, project

appraisal, and companies track record are just a few of the criteria. In addition, listed companies pay variable listing fees on their corporate capital size.

1.3.7 Regional Stock Exchanges in India

There are 23 stock exchanges in India. Among them two are national level stock exchanges namely Bombay Stock Exchange (BSE) and National Stock exchange of India(NSE). The rest 21 are Regional Stock Exchanges(RSE)

List of regional Stock exchanges in India

a. Ahemdabad Stock Exchange
b. Bombay Stock Exchange
c. Bhuvneshwar Stock Exchange
d. Calcutta Stock Exchange
e. Cochin Stock Exchange
f. Coimbatore Stock Exchange
g. Delhi Stock Exchange
h. Guwahati Stock Exchange
i. Hyderabad Stock Exchange
j. Jaipur Stock Exchange
k. Ludhiana Stock Exchange
l. Madhya Pradesh Stock Exchange
m. Madras Stock Exchange
n. Magadh Stock Exchange
o. Manglore Stock Exchange
p. Meerut Stock Exchange
q. OTC exchange of India
r. Pune Stock Exchange
s. Saurashtra Kutch Stock Exchange
t. Uttar Pradesh Stock Exchange
u. Vadodara Stock Exchange

In 1894, regional stock exchange came into existence when establishment of stock exchange of Ahemedabad (ASE) was done. Then stock exchange of Calcutta (CSE) then came into existence which was 2nd to the series.

In sixty's there were limited or few recognized RSE's in India over the six cities. For the next two decades the number remains the same. These RSE's were in Calcutta, Indore, Madras, Hyderabad, Delhi and Ahmedabad. Many new regional stock exchanges were incorporated in 1980s, and this was the turning point.

Conclusion

A well grown & developed capital market can resolve the issue of scarcity of funds. It helps in enhancing the economic welfare of the societies by facilitating the productions & productivity in an economy. India's capital market started on time back in 1875 with Bombay Stock Exchange as the oldest stock exchange of not only India but also Asia. Since than it has been growing continuously and the growth is quite fast for few years. The stock market of India act as an intermediary to mobilize saving & to channelise it for using productively & consistenty as per the priorities of the nation. The share markets index is use to signify the stock markets as a whole. Therefore, the movement indicate the economic health of a nation to a large extents as the price of stocks is influence by macro-factors There movements and levels are indicative of the economic health of the nation to a great extent because of prices of shares are influenced by macro economic factors such as inflation, literacy rate, real GDP growth rate, industrial production growth rate, Government receipts and expenditures, exports, imports and Bank Rate of interest treasury bill rate etc. Continuous reforms and innovative products have made the Indian capital market quite attractive for both domestic and foreign investors to invest.

CHAPTER-2
FUNDAMENTAL ANALYSIS

2.1 Introduction of Fundamental Analysis

It examines the economic environments, industries performances, and companies performances prior of taking any investment decisions. The study of fundamental analysis is through underlying force that effect the economy's interest. It is the understanding of forces that are underlined and influence the interest of the economies. Fundamental analysis predict the future volatility of stock markets by using indications from a broader perspective. For economies nationally it focuses on economic data's to evaluate the development of the nation. It usually compares one economy with similar or superior national economies.
The real problem in fundamental analysis is the evaluation of indicators. Economic indicators have to be compared over a period of time to assess the favorable/unfavorable climate.

When any investor want to invest his money in share market and wants to know the prices of the shares in future fundamental analysis can be used. The process of predicting the nature of investment in future and the rates of returns on them can be analysed with the economic force into which they are operating, the types of industries to which they belong and the examination of company internal work methods by the help of various statement viz. income statements, balance sheets and statements of change in income.
The main purpose of economic indicator is mainly trying to form a strategy to make investment. It is not necessary that investor have to make their own economic prediction but they should understand and can calculate the movement of prices in the economies so that they can invest efficiently.

Whenever- an investor puts his money in the shares, his prime motive is to earn returns. Returns are in the form of dividend received by the investor from the company from time to time and increase in the price of the share so that they can enjoy the difference between the buying and selling price of the share i.e. the capital gains earned by the investor. Companies may distribute

whole of the dividend or retain some part of it. They retain and use those funds for further growth. Subsequently, the investors have interest in knowing the amount of dividends which they will receive on shares in future and are also interested in knowing the future price of the shares.

2.1.1- Definition

Fundamental analysis is a method to find out the value of securities by putting focus on the underlying factor that actually have influence on the businesses of the companies and it's future prospect. On wider basis, one can conduct it on industry or on the economy as a whole. It not only analyze the price movements but also the economic health of the financial entities.

2.1.2-Fundamentals: Quantitative and Qualitative

Fundamental factor could be divided into 2 groups qualitative & quantitative. Their financial meanings are similar to the regular meaning for these terms.

(a) Quantitative is measurable and expresses in terms of numbers.
(b) Qualitative defines the qualities or characters of something which is mostly in contradiction to its sizes or quantities.

Quantitative fundamental are numerical, quantifiable characteristic of a business. It is easy to find out an important basis of quantitative data is financial statement. One could easily find out revenues, profits, asset etc. with great precision.

Qualitative fundamental focuses on the intangible factor like surroundings of an enterprise, qualities of members of the board of directors, the brand name, patent, technology etc.

Quantitative Meets Qualitative:

Taking qualitative or quantitative individually doesn't solve the purpose. None is better than the other. Both are to be taken together into consideration while doing fundamental analysis.

2.1.3-Conclusion

An investor invests his money in order to earn maximum returns. In order to earn such high returns he goes for expert's opinion. Such two experts discussed in this chapter are Technical analyst and fundamental analyst. Technical analyst says that an investor can beat the prices with technical analysis as future prices can he predicted from the past prices. Fundamental analyst says that when you want to invest your money in some company it is very necessary and important to understand that the company is doing what with your money and for that you should understand its markets & industries through which it functions or operate. Before investment, proper research should be done and that can be done through the financial statements of the company in which you are planning to invest. Proper understanding and interpretations of these statements should be done Blind investment must not be done in any company. Now there are both favorable and unfavorable critics for technical analysis and fundamental analysis. This study has also tried to prove whether both technical analysis aid fundamental analysis are of some use or not.

2.2 Economic Analysis and Factors of the Economy

2.2.1-Introduction

The price movements in share market is the occurrence that has crossed the boundary of academics discipline and has continuous research proof for almost a century. In current scenario, it has become exciting to conduct financial research as previous findings are being questioned and new findings are suggested. It has now started to dissatisfy the researchers as efficiency of the market has become the basis of literature that is developed now. Share market fluctuations are explained by reviving the ideologies of Keynes on speculative markets. With time it will be understood that whether the current crisis can lead to revolution of thoughts & developments in stock market's coherent theory. To understand and find out the emerging line of thoughts it is essential to have stocks of recent literatures for market efficiencies.

2.2.2- Definition

The systematic method to determine the optimal utilization of scarce resource that involves the comparing of two or more alternative to attain a specified objective under the given assumption & constraint.

Economic analysis considers the opportunity'cost of the resources that are used and also attempt the measurement in monetary term, the private & social coast benefit of the project to the society or economy.

2.2.3-Economic Analysis

The analysis of economy studies whether the economic environment is favorable & helps to encourage the development of businesses sectors, specially the stock markets. At the time when economies grow many industrial group's and company's are expected to get the advantage &

develop. At the time when economies drops down mostly the company's have difficulties in even surviving.

Therefore, to forecast the stock market return a shareholder has to invest considerable time in understanding the force that operates in a country. For making investments internationally, understanding of world wide economies becomes essential. Selecting an economy for investments should be done with due consideration on that nation's economic situation.

It is essential to forecast the growth of the nation as economic activities affect the corporate profit. It is not necessary that it affects through tax policy, but foreign policy & administrative policy can also affect it. When the economy's rate of growth is slow or zero, corporate profit also becomes low which can cause danger to investors viewpoint and decrease the price of the share further.

The degree of economic activities have impacts over investments in numerous ways. If there is a rapid growth in the economy, there will also be rapid industrial growth & vice versa. As economic activity level decreases the stock price also decreases and when the economic activity level increases the stock price level also increases showing prosperous view of sale and profit of the firm. There is a necessity to study the macro environments so as to understand the stock market.

Investor have concern only with the forces in the economy's that can influence the performances of the organization into which they want to participates by purchasing the stocks. Understanding the economic force will generate the ideas of the future corporates earning & payments of dividend & interests to investors.

Broad forces within which the factors of investment operates are:

1. **Population:** The type of population provides an idea about the type of labour that will be present in the country. Increase in population will give rise to industry which are into business like residence, health and consumer demand. Economic growth and development is required in those countries where population is rising. The nations having

high rate of population will be having high demand for labours intensive industry. Investor should choose the industry that has high amount of forces of labours.

2. **Research and Technological Developments:** The economic forces relating to investments depends on the quantity of a resource spend by governments on the growth and development of specific technology that is going to affect the future. Before making any investments, investors must understand and make investments in those sectors where funding by the government is more.

3. **Capital Formation:** Investors must understand the type of investments that companies make in long term capital goods and the amount capital which is required for modernizing and replacing the asset. This is also reliant on kind of economic variables in the nation.

4. **Natural Resources and Raw Material:** The natural resources to a large extent accountable for countries economic growth and complete improvements in the conditions of commercial development.

2.3 Financial Factors

The factors that are relevant for broader economies at regional & national level and influences huge population instead of few selected individual. The financial factors like inflations, saving & investments are the main indicator of economic and financial performances of the companies that are listed and government, consumer and business monitors them. Macro factors play very significant roles for the development of an economy and also in decision making capacities.

Major Factors of the Economy

2.3.1 Gross Domestic Product

Gross-Domestic-Product(GDP) is the most important element of economic activities. It is the entire quantity of good & service produced in an economy in the period of one year. The calculation of it is done with the addition of markets worth of all good & service manufactured during the period of a year.

Gross Domestic Product have various elements. Analysis of elements is of great help for the investor, just like other economic factors such as rate of interest and exchange have effects which are differential on the elements of GDP.

The main elements of GDP are:

1. Expenditure on consumptions
2. Expenditure on investments
3. Expenditure by Government
4. Exports of Goods and service (domestically)
5. The productions of goods and services consumed in the process of distributing imports of the domestic consumer.

GDP or gross domestic product is the basic indicator that is used to find out the economic well being of a nation. It is an average of the total productions done economically in a nation. Gross domestic product represent the market's value of total good & service that are being produce in a country which also includes consumptions, purchase done by the government, private inventory, construction expenses & trade balance.

Gross Domestic Product = C+G+I+NX

Where:

"C" = all private consumptions, or consumer spending in a nation's economy

"G" = the sum of government spending

"I" = the sum of all the country's business spending on capital

"NX" = the nation's total net exports, calculated as total exports minus total imports. (NX = Exports – Imports)

GDP is most often presented on an annualized percent basis. Most of the individual data sets will also be given in real terms, meaning that the data is adjusted for price changes, and is therefore net of inflation.

Methods of determination of Gross Domestic Product

Gross domestic product can be understood by three methods, they are:-

1. Product Approch
2. Income Approch
3. Expenditure Approch

1.Product Approach

It is the most direct method of the three, which adds output of all the enterprises to find out the total. The principle behind the expenditure method is that all the products should be purchased by someone, so the values of the total products must equalize the total expenses of the people in purchasing the things.

"During the period of one year the market value or the market price of all final goods & services." This method is termed as 'Net-Product' or 'Value-Added' approach. It consist of 3 stages-

1. To estimate the gross values of production domestically in different economic activity.
2. To determine the consumables via material's cost, supplies & services that are used for the production of final good and service.
3. To deduct the value of intermediate consumables to get the net-value of domestic outputs.

Symbolically,

Gross Value Added = Value of outputs – Value of Intermediate Consumption.

Value of Output = Value of the total sales of goods andservices + Value of changes in the inventories

Gross domestic Product at factor cost is the sum total of gross value added in different economic activity.

Gross domestic product at producer price is the factor cost plus indirect tax less subsidy.

2.Income Approch

The principle behind the income approach is that income of productive variables should equalize their product's value and then determine GDP by estimating the total of all the producers income.

This approach measures Gross Domestic Product by the addition of income that firms pay to the household for the factor of productions hiring – wage for labour, interest for capital, rent for land and profits for entrepreneurships.

GDP = R + I + P + SA + W

Where:- R= rent

I= interest

P= profit

SA=statistical adjustments

3.Expenditure Approach

The principle behind this method is that all the products should be purchased by someone, so the values of the final products should equalize the expenses of the people in purchasing the things.

GDP = private consumption + gross investment + government spending = (exports- imports)

GDP = C + I + G + (X-M)

The meaning of gross is that GDP measure the total amount of production done without considering the uses to which it is put. The production done could be used for the replacement of fixed asset, consumptions or for investments. The production done within the border of a country is known as 'domestic'. Expenditure method considers the exports as reduced by imports so as to get the weed out the expenses done on the items which are not produce in the country and consider the things which are produced but not sold in the country.

2.3.2 Inflation

As per economics, inflation is said to be an increase in the price level of products and services in the economies over a period of time. When there is increase in the general price level, every unit of currency buy's lesser products and services. Therefore, inflation explains decrease in purchasing power of currency – a decline of real values in the internal mediums of exchanges and units of accounts in economies. Rate of inflation is the chief measure of the price inflation, the changes in the annual percentages in the general prices of the indices over time.
The effects of inflations can be positive & negative at the same time.

Negative impact of inflations includes decreasing of actual value's of money & various other money worth item during a period of time. When there is ambiguity regarding inflations in future than there will be lack of saving and investments, and this can lead to shortage of goods, when consumer starts to hoard thinking that price will increase in future. Taking the effect positively central bank can adjusts the normal interests rate and will encourage investments in non monetary capital project.

High growth of money supply will lead to inflations and hyperinflations as agreed by economists. There are varying opinions with regard to determining small to moderate rate of inflations. The small to moderate inflations can be because to fluctuation in actual demand for good and service or any change the available supply. Although the general views are that a long continued period of inflations is because of growth in money supply is faster than the growth in the economy.

However, mostly the economist prefer a low and steady rates of inflations. Low inflation reduce the occurrence of economic recession and enables the labour markets to settle at the quickest at the downturn that in turn reduce the risks of liquidity traps and prevent monetary policy to stabilize the economy. It is the duty of monetary authorities to keep the rates of inflations low & stable. Normally, the monetary authority is central bank that controls the monetary policy by setting the rate of interests by open markets operation and also sets the reserve requirements.

Measures

The calculation of inflation is done on the basis of prices of indices comonally on the basis of CPI. The measurement of price for the selected products & service which is bought by a consumer is done with the help of CPI. The rates of inflations is the percent change in prices over time.

General effects of Inflation

A rise in price means a decline in the purchasing powers of the currencies. This means when generally the price increases then each unit of money purchases few things and service. As the inflations are not disbursed equally and as a result there is a hidden cost to some and benefit to others because of reduced purchasing power of the currency. For e.g. the people who lend or deposit and pay or receive fix interest rate on their loan or deposit will loose their purchasing power from the interest earning whereas the borrower benefits. The institutes or the individual having cash asset will have to bear declining purchasing power on their holding. Increase in payment to worker and pensioner will lag behind specially to those having fix payment.

Increase in the level of prices (inflation) erode the real values of the currency & other item with an underlying monetary nature.

Negative effects of Inflation

Increasing and volatile rates of inflation is considered to be harmful for an overall economy. High rate of inflation results in market inefficiency because of which it becomes difficult for companies to make budgeted planning for long term. Productivity can also be dragged as a result of inflation because of which product and services are forcefully shifted, so as to concentrate on the profit and loss due to inflation in currency. Saving and investment is based on the uncertainties regarding purchasing power of money in future. Inflation also imposes hidden taxes because earnings are inflated and the tax payer is pushed into increased rates of income tax until tax bracket is index upto inflations.

With increasing rates of inflations the purchase capacity is re-distributed among those who have fixed nominal income such as pensioner. Pensioner's income (pension) is not indexed according

to the price level and to those whose income is fluctuating and which may keep a good pace with the inflation. The purchasing power is also re-distributed among international trade partners where fixed rates of exchange are imposed, because of high inflation in one economy as compared to the other will result in first economy export to become expensive and will affect the BOP. There can be adverse impact to trade in an increased instability currency's exchange prices caused by uncertain rates of inflation.

a. Cost-push inflation

With high inflation employees can demand increase in wages promptly, so as to keep a pace with prices of consumers. As per the theory of cost push inflation, rise in wage rates in turn will increase inflation. As per collective bargaining, increase in wages will act as a function of inflationary expectation that can increase when the rates of inflations is high which in turn results into wage spiral. Inflation causes further inflation expectation.

b. Hoarding

As mostly people prefer to purchase durable and non perishable goods as a means of wealth so as to evade the loss which can occur due to decline in purchasing power of currency which in turn can create shortage of hoarded goods.

b. Social unrest and revolts

Inflation may result in public demonstration and revolution. For eg. Particularly food inflation is treated to be as one of the main cause of 2010-2011 revolution of Tunisian and 2011 revolution of Egypt as per many observations including the President of World bank "Robert Zoellick". After the demonstration of only 18 days, President of Tunisia Zine El Abidine Ben Ali and President of Egypt Hosni Mubarak was ousted and protest was spread in most of the countries of North Africa and Middle East.

c. Hyperinflation

In the event of inflation getting thoroughly out of control (heading upward), it can have a huge impact on the economy affecting its ability to supply goods. Hyperinflation may result in abandonment of the use of countries currencies' which can result in the inefficiency of the barter.

d. Allocative efficiency

With the changes occurring in the demand and supply of a good will normally causes its relative price changes that signals buyers or sellers to reallocate resource as per the responses of the new market condition. Because of inflation, prices keeps on changing, price change because of relative prices signal is hard to differentiate from price change because of normal inflation, therefore agent are slow to respond to them. This results into allocative efficiency loss.

Positive effects of inflation

a. Labor market adjustments

Normal wages or say nominal wage is very sluggish for adjusting itself downward as per Keynes. There can be continuous imbalance which can lead to unemployment in the labour markets. As inflations will decrease the real wages if nominal wage is kept constant. Keynes argues that sometimes inflations are worthy for the economy as because of it labour market reaches the equilibriums at fast rate.

b. Room to maneuver

The basic tool that can control the supply of money is the strength to set such a discount rate at which bank borrows from central bank, open market operation that were the central bank intervention in the bond markets by having an motive to affect the nominal interest rates. If any nation find itself in the condition of recessions having already low or zero as minimum interests rate then bank in position can't deduct these rates further for stimulating the economy, this kind of situation is known as "liquidity trap". A minimal level of inflations tend to ensure the minimal interests rate stay sufficient over zero so that if required bank can deduct the minimal interest rate.

c. Mundell–Tobin effect

Normal inflations will push saver for substituting the lending for some money as a source of financing the future spendings as pointed by the Robert Mundell. Interest rate rates will go down with this substitution. As the interests rate will get reduced due to market clearings this would

enhance the borrowings that will accelerate the investments. He also pointed out that inflations will substitute the investments, the physical assets to money balance in their new portfolio. To substitute would mean to choose that kind of investment with lower return as the investment with the high rate of return is already done. The two effect in relation are termed as Mundell Tobin effect. As per the models, until the economies are already over investing as per the model of economic theory of growth, that additional investments that has been resulted as per the effect will be seen as positive.

2.3.3 Interest Rates

Lending interest rates are the bank rates which fulfills the financial requirements of shorter & longer terms of private sectors. The rates differs as per the credibility of the borrower and objective of finance. The term and condition attached with the rate vary from country to country though putting limitations on their comparisons.

the Bank Rates are the minimum interests rates that central bank of a county charges on loan & advance that are given to commercial bank. For controlling the supply of money in the banking's sector and the nation the central bank of a country uses it. To have stable rate of exchange of a country and for controlling the inflations this is implemented on quarter basis. The fluctuations in bank rate trigger's ripples and as a result it influences all the spheres of a nation's economy. For example, the price in share market reacts to interest's rate changes. Changes in bank rate will effect customer as it influence the prime rates of interests for personal loan.The increasing bank rates will increase the rates of interests and credit becomes dearer. Therefore the demand for credits becomes less. While, decreasing bank rates lower the market rates of interests charge by the commercial banks from their borrower. Credit become inexpensive. So, demand for credits expand. At the time of inflations the central bank follows the dear money policy for reducing the supply of credits. At the time of deflation central bank follows the cheap money policy for expanding the need of credits.

Increase in interest rates, as a cause of increasing inflation, government's policies, risks premium, or any other factor that will leads to lesser borrowings and an economic slow-down. Rising interest rates lead to a decline in bond prices and typically lead to a fall in share prices.

When interest rates rise, the investors required rate of return on shares rise as well, causing the, prices of securities to fall. Rising interest rates also make bond yields look more attractive relative to share dividend yields. One measure of interest rate that influences business demand for loans is the bank prime lending rate.

Prime rate is the interest rate charged by banks to their most creditworthy customers.

2.3.4-Industrial Production Growth Rate

Industrial Production is a measure of the country's economic health judged by its output from manufacturing, mining, and utility industries.

As per Federal reserve indices for industrial productions and the indices of the related capacities and their utilizations rate which consider manufacturing's, mining's and electrics and gas utility. Industrial sectors including constructions can create fluctuations in an economy's output during a business cycle. The indices for productions can measure the actual outputs and is the percent of real outputs in the base year. The indices for capacities which is a measure of stable potential outputs is a percent of real outputs in the current year. The capacities utilization rates is equal to season wise adjustment in the output indices which is expressed as percent of related capacities indices.

The indices of industrial productions are obtainable at national level by markets & industrial groups. The main groups comprises of final product, inter-mediate product and material. The industrial groups are manufacturing, mining & utility. The utilization of capacity's rate reflects the use of an economy's outputs facility is provided for same markets and industrial groups.

Industrial productions got revised by NAICS in the beginning of 2000s. In contrast to the other economic series that has missed the past data before 1992, the Federal Reserve Board reconstructed the past data for last 30 years.

Why investors care

To understand the performances of the investment, investor always wanted to keep their fingers on the pulse rate of an economy. To get high corporates profit, share markets have to seek strong economic growth. The passive growth is required for the bond markets as it would not lead to inflations. By understanding the economic data investor will understand the drawbacks of an economy for the market and the portfolio.

The industrial productions indices show the total productions by factory, mine and utility. Less than 20% is accounted for the manufacturing sectors but it goes with the cyclical variations. Subsequently this will affect the market's behavior. It can be easily seen that capital good and consumer's good are whether growing or not in a given month.

The amount of capacities that are getting utilized gives an idea about the capacities that are being used and if the rates of using becomes higher i.e more than eighty five percent, it create inflation in the productions. There is close watch by Federal Reserves on this as it set the rates of interests on this very base . It also checks various constraint that can create a threat to create pressure of inflation. While, bonds market are high in sensitivity to change of any kind in rates of utilizing the capacities. In the world of globalization, international capacities can matters in the same way as capacities constraints in the domestic purview.

Importance

The industrial-productions and rate of utilizing the capacities not only indicates the trends in production industries however also suggest that whether the utilizing of resources is adequate to predict the rates of inflations. Industrial-productions is a significant aspect for the production of a nation and also help in defining the periods of business-cycles.

Interpretation

The bond markets will start with a slow speed in productions and less rates of utilizing. There will reduction in rates of bonds when there is good production and the rate at which the

capacities are being utilized suggest the bottleneck. In the bull markets the growths in productions is only possible if it does not accompany inflation pressure.

The service productions have gathered significance in U.S but then also producing manufacturing products is the main factor to the business-economic-cycles. An economy's growth is judged by the production of the goods that are in demand by domestic citizens and also by importer. There are various products and services that are essential for the lives and is required in any condition. When the economy is growing the consumer durable goods and capital goods are more in demand. The fluctuations in the economy is caused by the manufacturing goods. If there is less demand of manufacture goods then there will be less of productions leading to decrease in incomes and employments.

The most important sector includes IT, aircraft and Motor vehicle. Fluctuations in any of these sectors can have an effect in total. While, industrial-productions can have fluctuations every month. To understand a clear picture of trends one can utilize the three month's trend or moving averages.

Index of Industrial Production (IIP) can be understood in simple terms as the indices of the growth in various sectors of the economy. For example, IIP of India focuses on the sector like mining, electricity, manufacturing and general. It is needed to decide about the base year, as on the very basis the index figures will be derived. The base year for India is fixed to 1993-94 so it will be equal to hundred points, but this has been changed now to base year 2004-2005.

In simple terms, it is an indices that detail out the development of different sector of a nation. For example index of industrial production of India will consider electricity, mining, manufacturing and general. To arrive at the index data the base year needed to be fixed. Indian base year previously was fixed as1993-94 which was equal to hundered points and now it has changed to 2004-05.

IIP or index of industrial productions are not the concrete numbers the total amount of it represent the position of productions at a given time period for industrial sector in comparison to reference time period.

2.3.5 Fiscal Deficit

The differences among the revenues & expenses of the governments are known as fiscal deficits. It indicates the total borrowings that will be required by the government in future. When revenues are totaled borrowing is excluded from it. Normally, it occurs due to high increase in the capital expenses or deficits in revenues. Long term assets like factory, building etc. are created with the capital expenses only.

To finance the deficits either funds are raised from stock markets by the issue of various instrument like T-Bills, bond etc. or by the borrowings done through the central bank. It indicate the governments regarding the total amount needed for borrowings. Revenue deficits and capital expenditure are the basic components of Fiscal deficits.

When the actual amount received is less than the estimated amount that is to be received is termed as revenue deficit.The total amount invested for the production of the fixed asset like properties, equipment or industrial building. This is done for the maintenance of the operational activity.

In India the central bank i.e. Reserve Bank of India finances the fiscal deficits, this is known as deficit financing. Money market also finances the fiscal deficit.

Economic recessions could be escaped with the help of fiscal deficit. For the maintenance of balance budgeted policies it is necessary for the government to reduce deficit. Many economist believe that when fiscal deficits are related with inflations, the part of deficits that are finance by the fund that are obtained from RBI give rise to the amount in the money stocks & increased money stocks leads to inflations. As per the recommendations of financial advisor, dis-investment must not be promoted to decrease fiscal deficit. It can be decreased by enhancing revenue and reducing the expenses.

2.3.6-Exports

The term exports means shipping the products and service outside the territory of a nation. The person who sells such products & service is termed as "exporter" who is residing in the country of exports while the person purchasing in the other country is known as "importer". As per international trade "exports" means to sell off good & service which are being manufactured in the home country to other countries.

- The exports of goods happen when the residents transfers the ownerships to a non-resident but it does not always mean goods that are being transferred cross the border in the physical form. Though, in some case national account impute change of ownerships although as per legal term no change of ownerships occur. Goods for which smuggling is done also forms the part of exports measurements.
- Exports of service includes all the service that are being given by resident to a non-resident. As per the national account the purchases that are done directly by non resident in the local boundaries of a country are termed as export of service, so all the expenses done by foreign tourist in the local boundaries of a country are treated as the export of service for that nation. Illegal flow of services rendered internationally are also counted in.

HISTORY

The foreign trades & commercial policies are the first branches of economics thought. As exports are the basic factor of foreign trade and the risk and benefit associated with it, is debated many times by economist & others. Mainly two views are concerned with foreign trade i.e. to understand and recognize the benefits associated with it and the harmful impact on local and domestic industries due to international competition.

PROCESS

The techniques of export includes the products, goods and information which is done through mail, deliver by hand, transported by boats or airplane or download done through internet.

Export includes dissemination of information done with the help of an emails or faxes or through telecommunications.

BARRIERS

Trade-barrier is normally described as government's law, regulation, policies and practice which can protect product domestically from competitions internationally or any kind of activity that can arouse the exports in an artificial way of the goods domestically. Whereas, ristrictions in businesses practice can also have the same effects, they are not ordinarly treated as barrier in trade. Most commonly known trade barriers were impose by governments which restricts, prevents or hinders foreign exchanges of product & service.

TARIFFS

When export from one country of a product, good or service or import of a product, good or service to a country is done a tax is levied known as tarrif. Though, this is used to restrict a country's trade when the final production done locally or domestically for a product is falling and import from international competitor is increasing, especially when there exists strategic reason to retain production done domestically.

The industries which are loss making and cannot do the production in quick, cheap and productively, can protect themselves by putting tariff over the industry similarly like subsidy.

Thirdly, tariffs also involve issues of dumping. It refers to the nation that produces their final products in huge quantities and then dump them in other foreign market, produces the effects of the price which are too low. This refers to the price charged in the foreign country which is too low than the price charged in the local or domestic market , it also refers to the price at which goods are being dumped in another country at a price on which there are no profits or losses. The main objective of the tariffs are the encouragement of spending's on domestic products & services.

The new industries also known as infants are in the phase of high growth. Tariffs are used in a temporary way that allows the industries to get success instead of hard competitions. If the new application of the resource gives extra productivity than tariff imposed with the purpose of protection are considered to be valid.

SUBSIDIES

The industries which are not able to cope with or are not profit making normally use subsidy. Subsidies are the financial aid provided to the industries which have failed to manipulate the prices below the market values. As subsidies reduces the prices for the common man so therefore encourage the demands for goods and services.

This discourages the other nations that can produce a specific goods or services at fast, cheap and more productive rates. With the reduced prices the manufacturers having more efficiency couldn't competes. Normally, subsidies are granted for a shorter duration but can also be granted permanently.

2.3.7-Imports

Imports can be understood as bringing good and service in the port of a nation. The person who purchases such products & service is termed as importer who lives in the nation of imports while the seller from overseas is known as exporter. Therefore import of any product or services which is transported from one nation to other nation in typical fashions for use in business. The nation that receives, for them it is imports and the nation that sends, for them it is exports.

- Imports of goods occur when the owner changes form a non inhabitant to a inhabitant. It is not necessary that products and service goes to the other nation in the physical form.. Although, in some case national account attribute change of ownerships though in legal term there occurs no changes. Smuggled products also form the part of imports.
- When service is rendered by a resident to a non resident is termed as import of service. As per national account the direct purchase by a resident out of the economic territories of a nation are termed as import of service. Although, the expenses done in the another nation by the tourist is considered as import of service. Any illegal flow of service is also included in the import of service.

- Internationally flowing illegal service or the smuggling of goods are usually not recorded in international flow. But for official trade statistic little portion of illegal service and goods of which smuggling is done is included by dummy shipment and dummy declaration that hides the illegal character of the activity's.

Kinds of imports

Imports are of two kinds:-

1. Industrial and consumer goods
2. Intermediate goods and services

The goods that are unavailable in the local market or are easily available from abroad that too at less price and better quality as compared to the goods manufacture domestically, so the companies does imports.

2.3.8 Money-Supply

Money-supply can be understood as the availability of entire currency in the economy's in a particular time period. It includes cash, coins and balances. According to the economist for understanding any economy, policy and money supply is very important factor. Money supply has close relationship with the inflation as changes of any kind in money supply affect inflation in any economy.

When supply of money increases it lowers the interest rates which give rise to investment and provide ample of money in the hands of consumers, that inturn increases the profit making capacities for the consumers of raw material and increased production. Increase in business activity increases the demand of labour and vice- versa.

Changes in supply of money is always considered as the key factor in the macroeconomic performances. Macroeconomic school of thought that focuses on the role of money supply is Irving Fisher.

Money Supply Measurement

Money supply are generally classified as Ms, such as M0, M1, M2 and M3 according to the type and size of the account in which the instrument is kept.

M0 and M1 includes narrow money and include coins and notes that are in circulation and other money equivalents that can be converted easily to cash. M2 includes M1 and, in addition, short-term deposits in banks and certain money market funds. M3 includes M2 in addition to long-term deposits.

In the present study M1 is used,as demonetization occurred in the Indian economy during this period. (Yugang He, 2017) has verified the impact of GDP and inflation and interest rates on the money supply in China and found out that increase in GDP, inflation can increase money supply and increase in interest rates can decrease in money supply. (Yijun Li, 2012) studied the relations among money supply and share-market. The suggestion given was that the stock-market have converse relation with money-supply in the long run, whereas money-supply have linear relations with stock-market.

CHAPTER -3

LITERATURE REVIEW

3.1 Review of Literature

The matter that is the topic of strong discussion among academicians and finance professionals are the major factors of the economy and their concerned impact on the capital market. The growing amount of evidences as observed by various researcher has lead to the assumption that a series of finance variables and macroeconomic variables can forecast the macro economic returns. Various efforts has been done to diagnose the various factor and asset price. The result of the study fluctuate subject to the scope of the study and the types of assets and variables used. The below given literature gives a clue regarding various studies on the linkages of the growth in stock and major factors that affect in this growth of various countries. Various studies that have been considered have used different kind of econometric tools to understand the relations among macro-factors and share price indices. The study's done have been chronologically in the following list as per the year of being published.

As Irving Fisher (1930) pointed out that minimal rate of interest decomposes into interest rate that is expected and real inflation element also which is again expected. The argument by Fisher was that returns which are real on nominal stocks and the inflation which is in expectation are not dependent and nominal scrip return can fluctuate in one to one correspondences with the inflation that is expected. In the same way **Fama and Schwert (1977)**showed that in United States common share return was negatively-correlated to the anticipated element to the rate of inflation & perhaps to the element too which is not expected. On the same lines **Kenedy(1977) & Sharma(1983)**tested fragile forms of efficiencies of Bombay stock exchange. His both the studies concluded that shares in India generally followed random walk behavior and the consecutive periods change was independent.

Similarly **Firth (1979), Maysami (2004), and Adam & Tweneboah (2008)** reported an important positive relation among inflation & share return. The findings suggested a severe

disparity to observed work that have found an important negativity in relations among share return and inflation which is expected.

In the same way **Fama (1981)** detected negative relation among real stock prices & inflation seen all through the period of 1953, which was the result of dummy effect. Relationship of inflation & stock prices are induced by negative relations between the real activity and rates of inflation. There is positive relationships between real stock and capital expenditure and the results that show the investment in capital and with the expected rate of return in excess of capital's cost. Moreover the rate of growth of money and real activity eliminate negative relation among real returns of stocks, expected inflation rate and facts that most of variations in the demand of the money as reaction to changes in real activity. In the same way **Saunders and Tress (1981**) indicated that share price return and inflations rate for the economy of Australia are negatively associated which implies that share are not a good tool to hedge inflation. This piece of work also suggest that there exist uni-directional relations among share market return and rate of inflations together with prices levels change & index of equities.

Normal stocks return in Australia and rates of inflations are negatively associated i.e. shares are particularly not the good hedge against inflation by the investors. The research also reveals that there is uni-directional relations among inflations & share return with the change in price levels that can lead to equity indices on time.

Likewise **Gultekin (1983)** didn't found linear relationship amomg normal share return and rate of inflation. He tested the general Fisher hypothesis in twenty six countries for the time periods from 1947 to 1979. Though, the results reveals that the coefficient of regressions are mostly negative. One can find negative relations among inflations & share price in various literatures as inflations increases it decreases the earning & return. Considering the economy of United States many evidences have been found regarding association of increasing inflations with increasing the risk premium for equities and decrease in share price.

Multifactor model was tested by **Chen (1986**) studied the market of USA by using 7 macro factors and concluded that index of market, prices of oil and level of consumption are not assessed by the financial markets. Although, changes in the risks premiums, industrial produce & changes in the yield curves are very important for the explanation of stock's return. Chen (1991) also conducted a second research study for the market of USA which suggest that future market can be predicted with the help of certain macro factors like dividend price ratio, default spread, industrial produce, term spread, and one month t bill rate. For Indian economy **Darat and Mukherjee(1987)** used VAR test and also used Akaike concluding forecast for Indian economy for the period 1948 to 1984 & found that there is causal relations among share returns & macro-factors.

In the same way **Chen (1986)and Fama(1990)** findings suggest that economic activities (real), rate of interest & share returns are in correlation. They studied short term relations among share markets and macro factors, that can eliminate significant information enclosed in the stable components of economic activities regarding the growth of short-run movements. As compared to above, long term relations among share market & economic factors have got very slight consideration by academician excluding **Mukherjee, Naka, (1995), Chung & Ng (1998), Maysami and Koh (2000) and Nasseh and Strauss (2000).** Used co- integration and found out long-term relations among share and market index and both processes of economic-activity and financial-factors. Co-integration among share price & economic activities was seen to be consistently associated with internal as well as theoretical consumption & productions based assets price model. The model suggests that stocks price are in relation to anticipated future production with the impact of discount the values of change in cash flow & dividend. In the recent time many model not having actual theoretical structures was used to find out the relations among share price & economic-factors. The VAR models is basically used in this field as it is an exam which is conducted formally of inter relations in a specified data-set without the urgency specified for theoretical framework. If it is estimated correctly then this model can be applied for stimulating the effect of shock consistently with data and by using impulses response function and predict error variances.

Study for Nigerian market was conducted by **Ogiogio (1988)** who analysed the Nigerian stock market and concluded that it was certainly influenced by holdings of the asset by investor. He finally concluded that share price and rate of interests are negatively associated as if there is any

kind of associations, it is always expected to have a negative one. Similarly Montel (1989) analysed that as it is believed that increasing inflation gives advantage to normal stocks since increase in rates of inflations increase the return to share holders as the price of the share increases fast then wages rate. The relations expected among rates of inflations & return to shareholders will be effective if the trading firm was debtor & if the rates of interests on debts fails to show the change in future price levels. Likewise **Aidoo (1989)**concluded that various variables like instability in politics, lack of growth rate, entrepreneurship & demands for stock are few of the variables that can effect the performances of GSE. The research found out that there will be huge growth of stocks exchanges for demand & supply but only if the political and economic situations are in favor.

In the same way **Asogu(1991)** was of the opinion that rates of inflations are normally considered to allocate the state of quick, determined & un-acceptable increase in normal levels of prices in a nation that results into decrease in the purchasing powers of the currency's. As per his views increasing rates of inflations, increases the discomforts of consumer, investor, producer and the governments.

Similarly **Paddy (1992)** stated that economic and fiscal environments are on of the important block of that controls the growth of security market. Total economic environment pushes the profitability of the businesses which fosters them to a stage where security's are easily accessable for overall growth. In general the scale used for judging the performances of an economy are rate of exchange, interest, inflation. Fiscal and debt position. Out of them rate of exchange, inflation & interest can be pointed out to have impact on capital market activities as these directly impose at the stages of corporates activities of the country.

Empirically, **Atje and Jovanovic (1993)** studied that to find out robust proof to help the environment that capital market growth can lead to an economy's growth. The period used was from 1976-1993 including both developed and developing nations. Similarly **Clare andThomas (1994)** stated the effect of 18 macro-economic variable on stock market return in the economy of

United Kingdom. The findings concluded that price of oil, retail index, banks lending's, corporates risk to be the significant variables for the return of stock in United Kingdom.

On the same lines a significant work in the area was conducted by **Mukherji and Naka. (1995)** they used vector error correction statistic and found outthat relations among stock returns in Japan and macro factors. The six macro economic variables considered by them namely are rates of exchange, inflations, supply of money, real economic activities, bonds (long term) & rates of call money. A model of 7 equation was testified by using cointegartion and vector error correction model. Results reveals that there are negative relations among inflations and equity price. Country share market performance is affected by any kind of changes that occur in exchange rates. Lowering the value of currency of an economy which is export oriented will have constructive influence on domestic share market. The result concluded that cointegration relations exist and the share prices are responsible for it.

In the same way a significant study was conducted for the economy of Japan by Manabu Asai and Tsunmemasa Shiba (1995) they studied the relations among macro factors like index of industrial production, rate of interest and rate of inflation and Japanese stock market, using Toda and Yamamoto vector auto regressions (VAR). The main findings suggested that macro economic factors do granger caused the stock market whereas the vice-versa is not so clear. The study also suggested that the lagging stock market variables also effect the current values while its influence likely to decline in the long run.

Similarly **Naka, Mukherjee and Tufte (1996)** studied relations between macro variables and the share market of India. They used vector-error corrections model that suggestthe inflations and output in domestic economy are the two best factor that influence share price. An important research for Philippine market was done by **Bailey and Chung (1996)** investigated the impact of macro economic risk in the equities in the makets of Philippines. The results found out that financial fluctuation movement in exchanges rates, any change in political scenario on the owner of the Philippine equity cannot express stock return in Philippine.

Similarly **Levine and Zervos (1996a, b)** analysed relation among economic development & growth of share markets. It was concluded that growth in the economy and developments of capital markets are strongly positively correlated but only after the control of gross domestic product, human capital investment, policies of exchange rate, monetary and fiscal and also political instability.

To know the fact that stock market development affects economic growth **Harris (1997)**investigated and found a proof to upkeep the perspective that the growth of the capital market explain the economic growth by using least square (two stage). The findings suggested that the growth of economy can be explained by the developed nations but not by developing nations. The results also confirmed that all the previous literatures which lead us to trust the presence of share market will increase the growth in the economy just misleads us. For the stock market of Singapore **Mookerjee and Yu (1997)** found out the influence of major factors on the share markets of Singapore. The study found that reserve of foreign exchange and supply of money both the factor are cointegrated with stocks price. Though share price and rate of exchange does not have long run relations.

To some extent **Mookerjee and Qiao Yu (1998)** suggest that using of statistics like causality and cointegration along with equation of forecasts to check the information inefficiency for short & long run both. The study concluded that out of the selected four macro factors three ae cointegrated with share price that suggest the existence of potential inefficiencies in long runs. In the short runs test on causality and forecast of equation that provides opposite proof on the information efficiencies of capital market.

Similarly**Cheung and Ng (1998)**found the relation among share price and few macro variable like supply of money, real prices of oil, total consumptions and gross national product in United States of America, Canada, Japan , Italy and Germany. The findings showed that there exist a long-run relations among macro-factors and capital markets price. In the same way **Ibrahim (1999)** studied the dynamics in the interaction among KLSE indices and macrofactors like rate

of exchange, indices of industrial productions, consumer prices, supply of money(M1&M2), reserves of foreign exchanges. The findings suggested that various factor of the economy led the capital market ogf Malaysia. The conclusion drawn were Stock market of Malaysia was ineffective in terms of information. The study revealed that official reserves & rates of exchanges affects short-run share price as analysed by granger causality test.

Korean Stock market reactions was also analyzed by **Chung and Shin (1999)** investigated the roles of macro factors for finding the share price of Korea. The result indicated that there exist a cointegration amount four macro factors which are balance of trade, rate of exchange, supply of money and industrial production. Similarly **Bilson (1999)**raised the questions that macrofactor can be substituted for the risk at local level. To upkeep the hypothesis few evidences were found by them. Additionally they investigates the common degree in exposure through developing market were taken into consideration altogether. Some significant harmony existed at regional levels.

A significant work for the economy of Norway was conducted by **Gjerde and Saettem (1999)** who studied the relationship among the share return and macro factors in Norway. The findings of the study shows that there exist relations which have positive link between prices of oil and return of share price and also share return and economic activities. Though the study did not display any important relations among share returns and rates of inflations. To explore the Singapore market **Maysami and Koh (2000)** studied the same kind of relations in the economy of Siongapore. The results revealed that rate of growth in supply of money, inflations and change in short and long run interest rates and changes in rates of exchange the relationship of cointegration with change in Singapore capital market.Likewise **Agenor (2000)**states that high rates of inflations, high fiscal deficit, rate of exchange are the significant indications of macro economic instabilities that constraint investments and saving of private sectors that result in unproductive allocations of resource over the exchanges which in turn affects the performances.

Similarly **Pethe (2000)** analyzed the chosen macro-economic factors rate of exchange, rates of lending interests, M1 as supply of money (narrow), M2 as supply of money (broad), industrial productions index, index of Sensex and nifty. The results suggested that Unit root tests, co-

integrations & error-correction model suggested that there is no longrun relationships between the value of stock and the macro- economy. It is to be noted here that the concentration of these model was on the behavior of the stocks market that can be hailed by crunching. Most important and the qualitative aspects that signals the complete issue is that to help the investors and increase the market efficiencies.

Many studies have been conducted in the context of India Rao and Rajeswari(2000) have tried to find out the part that have been played by macro-factors in affecting the capital-markets when shorten up to the variables that can be managed. Various tools and techniques like Capital Asset Pricing Model, three factor & five factor asset pricing models were applied by them to understand the risk and returns relations among single share price and selected factors
Likewise **Udegbunam and Eriki (2001)** analysed to understand the relations among macro-factors & Indian stock market. The time period selected by them was 1994-2003, and collected the data's month wise. The factors they took into consideration was supplies of money, rates of interests, rates of exchanges, FDI and fiscal deficits. The study have concentrated on the computing the impact of the selected macro-factors on Bombay stock indices. Various tools and techniques were applied like vector auto regression and ANN and compared the findings. The results suggested that some variables like rates of interests, exchanges, outputs and supply of money have high amount of impact on capital-market whereas the other remaining factors have less degree of influence on the capital-market.

To explain stock market volatility **John J. Binder, Matthias J. Merges (2001)** examined the capacity of coherent economic variables to check share market uncertainty about the pricing levels, the interest rates, equity's risk premium and the proportionate profit expected and revenue expected in the economy. When statistically tested the factors have important power of explanation. There was more than 50 percent of the variation in the market volatility from 1929 to 1989. The 4 factors describe that more than 90 percent variation is there in market volatility when statistics like regression coefficients were allowed to fluctuate with time by using Spath cluster regression. The findings are very helpful in the explanation of previous conduct of capital market fluctuation and in the forecast of volatility.

To understand the relationship in the long run among macro factors of Pakistan Hussain (2001) found out that factors of economy like consumption expenditure, investments spendings and economic activities that can be calculated with the help of gross domestic product in Pakistan from 1959-1960 and 1998-1999 and used various statistical tools like unit roots tests, augmented dickey fuller tests, co-integration and error correction models to understand the relation (long run) among the value of stock and macro factors. His findings suggested that the variations in Pakistani Macro factor change the stock price and also impact the demand.

The speculations in the value of the stock occurs, suggesting reform which has caused in important improvements in the attitude of the stocks markets and the economy.Likewise **Bilson, Brailsford and Hooper (2001)** by using the method weighted market index and considering the macro factors explained the share market return for some of the growing market. The results revealed that price of the product and activities in real terms have little capacity for the explanation of the fluctuation in return. The findings also suggest that supply of money, return from the world market and rate of exchange have higher significance.

To know the long-run relations among various macro-factors and share markets **Ali, Norli (2001)** studied and investigated that change in macro factors of Malaysia like inflations, rate of exchanges, industrial productions, supply of money & market returns could describe the share prices fluctuations before and during the period of crises. They analysed that out of the selected 6 macro factors, which factor can have the impact on share return. The research also studied the kind of relations among macro factors and share return. For examining the relations month wise observations were used. The study is bifurcated in 2 sub period i.e. 1987-1999 &1987-1996. Arbitrage pricing model & error correction model was used to test the relations among share return and macro factors. The findings suggested that composite indices, rate of interests &exchange, supply of money were the prominent variables in finding out the return of portfolio. While, market performances appears to be the common variable that influences the sectoral index fluctuations. Similarly, for pre crises period i.e. 1987-1996 same models were applied. The results revealed that rate of interests, supply of money and market returns have important impact on fluctuations on the portfolio return. The findings suggested that market return was only single common variable that has significant impact on sectoral index. Moreover,

no significant relations were being found among the exchange rate &share return. Other factors like industrial productions, prospective inflations showed weak impact on asset prising during both sub periods. Supply of money, market performances & rates of exchanges have positive relations with portfolio return and sectoral index return. While, rate of interests, return of portfolio and sectoral index returns are associated in a negative way. Finally, it can be said that share market of Malaysia is influenced by fluctuations in Kuala Lumpur Composite Indices.

For analyzing long-run relations among price of stocks and macro-factors for Pakistani's economy of Pakistan **Hsain, Fazal and Mahmood, Tariq (2001)** for the economy of Pakistan has examined causal relations among various macro-factors. They considered the time period from 1959-1999 and have applied various tools and techniques like co-integration, error corrections model. The results revealed that there exists long term relations among the share prices and macro-factors. Considering the causal relations the findings suggested that there exits only one way causality from macro-factors and share prices. The results also revealed that Pakistani's capital market is not that strong and so it could not affect the demands and so it cannot be considered as a leading factor of economic activities. Lack of any strong indicator suggest that increase in prices could be the result of some speculations.

In same way **Bilson (2001)** analysed the indices of world markets and few macro factors to explain share return in the developing market. The results suggests that for explaining the variability of return price of the product and real activities have limited abilities. Supply of money is more significant however the most important factors are rates of exchange and markets returns of the world.

A significant work was conducted for the Asian country's by **Wongbangpo and Sharma (2002)** studied the relations among share price and also few macro variable in ASEAN country. The findings suggested that there is a linear relations of share prices & output growth for long term. But in short term share price are the function of current and previous worth of macro factors.

For US economy **Protopapadakis(2002)**checked an impact of macro broadcast series on United States stocks return. Out of the series factors which are six in number i.e. trade balances, indices of consumer price and producer price, supply of money (M1), housings and employment level

have impact on stock return. While, the other two widely held measure of combined economic activity does not have any relation with stocks return.Similarly **Sharpe (2002)**investigated and analyzed the impact of rate of inflation on the valuation of stock prices and estimated return in the long-term. The findings revealed that negative-relations exist among earning in the long run and inflations. On the similar lines **Flannery and Protopapadakis (2002)** for the economy of United States evaluated the impact of some considered macro-factors on share return. The considered factors were trade balance, money supply(M1), rate of employment, housing and index of CPI &PPI have an impact on share return while gross national product and IP does not show any kind of impact on share return.

Likewise **L.M.C.S. Menike (2002)** analyzed the influence of macro-factors on share price in Sri Lanka and considered the data month wise from 1991-2002. A multiple regression model was used to find out relationships and for examining the influence of macro-economic variable on share price. The fitted regression model reveals strong relations among macro-factors & share price. The findings indicated 27 stocks out of 34 have higher explanatory power of more than 50% in the monthly stock prices for the period 1991-2002, the period which provides the strongest evidence of predictability of macro-factors on share price. The key finding is that the null hypotheses which suggest the coefficients of the variables doesn't have influence on stock price and therefore it is rejected for all 34 stocks. In the same way **Bento Lobo .J (2002)** examined the influence of change on Fedral fund due to change in share price for the period 1998-2001. Results reveal that rates of interest and treasury bills rate surprise the most. The findings also revealed that target is decreased as share price increase. The surprise is also related to the increase in targets as volatility increases in share market. implications concern about instant disclosures that causes continuous growth in share markets volatilities.

To some extent **Carstrom (2002)** concluded the share price & real gross domestic product rates in future have close relations. As per his views, if there occurs any kind of change in the information for the rates of real gross domestic product in future it will certainly changes the prices of share market in the current situation. In the same way **Al-Qenae, Li & Wearing (2002**) studied the impact of both micro-factors & macro factors on share returns for the economy of Kuwait and found out that macro-factors do affect the share price but in a negative sense.

Bhattacharya and Mukherje(2002) have tried to analyse the causal relations among Bombay stock exchange & selected 5 macro-factors by using various technique like unit roots, granger causality & co-integration. Results revealed that there exist there is no causal relation among share prices and supply of money, rates of interests and national income whereas, the indices of industrial productions causes stock prices and there is dual way causal relations among share prices and inflations rate.

A significant study in this area was done by **Maysami and Sims (2002, 2001, 2001)** who used the techniques of errors correction to find out the relations among the macro factors and share price return in the economy of Singapore and Hongkong (Maysami and Sims), Malaysia and Thailand (Maysami and Sims), and Japan and Korea (Maysami and Sims) they studied the impact of rate of interest , inflations and supply of money, rate of exchange and dummy variable for financial crises with the help of Hendry approach, 1986 that permitted to draw conclusions in the short term and long term relations among macro-variables and also the long term adjustments to the equilibriums. The findings suggested that the impact of macro factors on the index of capital markets in all the 6 countries. Although the kind and magnitudes of association varied from one country to another country depending upon financial structure of the country.

Similarly **Islam (2003)** studied the replica of the above studies to find out short term dynamics, adjustments and long term equilibriums in relationship among 4 macro factors like rate of interest, inflation, exchange and industrial productivities and the indices of stocks exchange of Kuala Lumpur stocks return. The results were in line with previous studies. The findings suggested that short term and long term relationship among macro factors and KLSE stock return are significant.

Likewise **Islam and Watanapalachaikul (2003)** found an important relations among share price and selected macro factors like rate of interest, prices of bonds, rate of foreign exchange, price earnings ratio, markets capitalizations and index of consumer price for the period from 1999 to 2001 for the economy of Thailand. A similar study was done by **Chong and Koh's**

(2003) stated that share price, economic activity rates of interest and balances of money (real) associated both in long and short run pre and post controls period.

Ibrahim (2003) examined the supply of money, rate of exchange (bilateral), level of price and industrial production. Various tools like vector errors corrections model, co integration were used for month wise statistics from 1977-1998. The findings stated the existence of positive relationship among share price & two macro factors in short and long run. Perhaps exchange rates was related negatively with supply of money. There is a possibility that money supply give rise to inflation, expectation of risk factors resulted in adverse behavior of stock market.For analyzing long-term equilibrium relationships a significant study in this area was done by **Al-Sharkas (2004)** who examined groups of macro factors like supply of money, treasury bill rate, index of consumer price and industrial production and used the quarterly data from 1980-2003 and used vector error corrections model to evade mis-specifications bias and concluded that there is cointegration relationship between the factors which are in line with the prior findings.

Similarly **Gunasekarage(2004)**studied and explained for the stock market of Srilanka using various factors such as supply of money, rate of treasury bill, consumer price index and rate of exchange as the macro factors of the economy. The results revealed that apart from rate of exchangethe rest three factors specially rate of treasury bill have substantial impact on prices of the stock. But there was no indication found to support that the index of stock prices have impact on macro-economic factors except the rate of Treasury bill. Similarly **Nishat and Rozina (2004)**reported for the economy of Pakistan that there exist relationship of casual nature among index of industrial production, consumer price, money supply and the value of earnings on investment (money market rate). Examination of relations among macro-factors and returns from share markets is already recognized in the literatures. Although, instead of examining the composite index, co-integrations were tested among macro-factors and share market index.

For the stock market of Singapore **Ramin Cooper MaysamiLee Chuin HoweMohamad Atkin Hamzah(2004)** studied the long run relations among macro factors and the indices of share

market of Singapore. The findings suggested that share market of Singapore & property's index are co-integrated. Similarly **Cooper (2004)** analysed relations among macro-factors and share prices. His findings suggested that share market of Singapore & the indices of property have co-integration with short and long term interests, supply of money,changes in price level, rates of exchange and industrial productions. In the same way **DeStefano (2004)** investigated the movement of economic variables with the help of dividend discounts model that can help in the explanation of movements of share return over the business cycles. As per the estimation value of stock decreases during the economic expansion and thereby turns negative in the first halves of the recessions. Return is highest in next half of recession that suggest a significant role for anticipated earning. The findings were in the same line with the belief that value of stocks return as per the expectation changes inversely with economic condition, but also suggests, realized return are specially bad indicator of predicted return expected return before the turning point in business cycles.

In the same way **Flannery and Protopapadakis (2004)**calculated by using Garch model the return of equities where in realised return & provisional volatilities depends on 17 macro series announcement. The study revealed six candidate for price factor.For analyzing long term relationship **Boucher (2004)** analysed the relations among share price and inflations by investigating the trends in the long-run in share price as shown by price earning ratio and realised inflations for the predictions of the share market fluctuations. Particularly, they found that the deviation exhibits considerable in samples and out of samples predicting ability for both real share return and excess return. However, the findings also suggested that these variables provide the information regarding share return in future also.

For the economy of Pakistan **Nishat (2004) a**pplied various econometric tools like unit roots tests , augmented dickey fullers tests, vector error corrections and grangers causality tests for the period 1973-2004. The macro factors that were considered are supply of money, industrial productions, consumers price, supply of money, value of earnings through investment and rate of money market to find out the relations. The findings suggested that there exist an important

relationship between the supply of money, index of industrial production, consumer price and value of earnings through investment. The highest positive factor is industrial production and the highest negative factor is inflation for Pakistan's share prices. The total opposite causality was found out for the variable industrial production and share price. Significant lag length that connects fluctuation in the share markets & transitory in the real economies are rather short.

Similarly **Al-Sharkas, Adel (2004)** applied the vector error correction model (VECM) to find out influence macro factors over Amman's Stock Exchange (ASE). The findings suggested that share price and macro factors has no causal linkage. In the same way **Maysami (2004)** recommended that index of sectors,property, finance and hotel custom important relationship between selected factors and monthly observation for the period 1989-2001. Various econometrics tools were used to identify where index of equity finance, activity of the economy and supply of money were insignificant whereas index of hotel equities , supply of money interest rates (short and long) were significant. The efficient market hypothesis conclusions were in doubt. Auto regressives lag can be an important extensions of the study.

Likewise **Huang and Yang (2004)** used VAR model and suggested that for various developed economies and revealed that there does not exist any relations among macroeconomic factors and share price. Although a stronger proof was seen. However, strong evidences were in report for in-direct relations among Taiwan for supply of money & for United States for rates of interests.

A comparison done by **Humpe and Macmillan (2005)** who compared the economies of United States and Japan, reveals positive relations among IP (industrial production), CPI and tiny rate and adverse relations among rate of lengthy yields for the market of United States. For the economy of Japan they findings suggested a comparative weak relation for IP & CPI higher then the United States. Likewise **Choon-S.Lai, Roy Anusuya, (2005)** carried out a preliminary investigation of the effect of macro-factor news on mean share return. They regress daily returns of Standard & Poor 500 (S&P 500) index on news announcements of twenty-seven types of macroeconomic indicators from 2001 to 2004 and find a negative relationship between the index return and news announcements. Another professor **Gonzalo Castaneda (2005)** presented in his

study a theoretical framework to analyze the implications on economic growth of a stock market that grows but is not well-developed in other aspects (concentrated ownership, low liquidity, poor legal and judiciary systems, and credit constraints). The firms made of family were treated as risk-averse owner having control over their firm as well as going towards public. For this types of nations or economies they may gave non linear relations among share markets size & development of economy especially when the institutions are weak, the formations of the equities markets can be hampered. Likewise another professor, **Dimson, Marsh and Staunton (2005),** suggested that a share in gross domestic product is not represented by corporate profit. It is not necessary that a developing economies will produce equal growths in coporate profit, dividend and also return to investors. Since 1900, less developing economies have better share market performances. "Historically, buying into equity markets with a high GDP growth rate has given a return that is below the return of markets with a low GDP growth rate." They concluded that "there is no apparent relationship between equity returns and GDP growth." The data used was quarterly adjusted GDP data and corresponding S&P 500 indices data from 1950 to 2006, they found that high (low) rates of real GDP growth do not result in high (low) stock returns.

Similarly**Banerjee Arindam and Ali Mohammed Anwer(2006)** analysed relations among monetary growth and financial development .To test the hypothesis; they plotted the yearly growth in the GDP (Economy) and the Dow Jones Industrial Average in the American Market.)Thefindings suggested that capital market indicates the economic growth and does not depend upon the type of economies taken into consideration. For considering advanced nations like the United States we can get positive correlations while considering developing economies, it becomes hard to suggest any definitive conclusion. Likewise **Bhattacharya Rituparna, Sen Anuradha and Lahiri Anand Sandipa, (2006)** states a small description of volatile situation of share market of India and has explained the market development considering various economic and international aspect. They found that on the positive side, a well functioning stock market helps in developing the economies with growing saving, through the growth of savings, better channelization of investments and better utilization of the existing resources. However, on the other hand, the analysts view stock markets as a place, where the owners buy and sell the stocks according to their own convenience. Hence, the aspect of volatility needs to be carefully addressed.

In the same way **Patraa (2006)** explained practically by employing test of granger casuality, co-ntigration and errors correction models were used from 1990-1999. Supply of money, volume of trade have relation of short and long run equilibrium with share price of Athen Stocks Exchange. The findings were significant. The availability of information publicly of macro factors has made stock exchange of Athens non effective and non-efficient. For the predictions of share prices the volumes of trade can be used effectively. Likewise **Wong and Song (2006)**findings suggested that, hospitality stocks index and macro-factors in the US and the hospitality stock indices followed autoregressive processes and have an impact on macro-economic variables specially the bond yield. On the same lines **Beltratia and Morana (2006)** indicates the dual linkages among share markets & macro-factors volatilities. They have suggested a distinct change in monetary policies, interests rate, growth in money supply can help in breaking the volatilities in share return and so can explain the levels & jump in volatility. Share markets volatilities can also influence the macro-factors volatilities as the causal relations is strong from macro-factors to share markets volatilities.

An important study in this field for economy of New Zealand was done by **Gan (2006)**who analysed the relations among various macro factors & Index of NewZealand stock exchange for the period 1990-2003.Multivariate cointegration and granger causality test was used. Impulses responses & error variances statistic was also applied for 157 monthly observation for every factor excepts for oil prices, gross domestic product & consumer prices. The stock exchange of New Zealand is dogged by supply of money, interest rate & gdp. No such evidences have been found that index of New Zealand stock exchange is an important indicator of any change in the macro factors but in the short and long run they are cointegrated. Various factors like index of consumer price rate of interest, rate of exchange and gdp were consistent with New Zealand stock exchange and there is a negative relationship with index of consumer price. On the same lines **Chancharat (2007)**explained the variability of capital market from 1988 to 2004 (monthly).The model used were carch and garch that used sixteen countries share indices. The capital market returns in Thailand were affected by the macro factors. Neighbouring country's capital market also influences the Thai's capital market.

In the same way **Al-Tamimi(2007)** used various models to test the relation among various selected factors and share price. He used multicollinearity between different independent factors. The results of multicollinearity stated that there exist a high correlations among GDP, prices of crude oil, rates of interest and inflation. Every factor except rate of interst & foreign exchange have positive correlation. Subsequently factors were regressed. A considerate linkage among economic growth & financial growth in share markets and considering the economic activities particularly is significant in developing nations.

To understand the causality linkage among share markets and the economic activities in the context of Indian economy **Purna Chandra Padhan, (2007)** Granger non causality model for testing the statistics. The results revealed that the index of BSE and growth in economy have integration of order one . The results reveals that there is 1 cointegrating vector as suggested by Johansen-Juselius test, therefore it is suggested that there is no spurious relation and the existence of uni-directional causality. Toda Yamamota model suggest that there is a causalitry of bi-direction among share price & economic activities at the time of post liberalization which suggest that develop share markets can increase economic activities and vice versa. For economic development of any nation financial market plays a very significant role. Although, to understand the cause & effects relations among share markets & economic growth, it is necessary to examine the problem in detail. The results also reveals the limitations is using IIP as a dummy variable for economic activities that do not consider agriculture sector. Likewise **Chuang (2007)**estimatedthrough macro factor like supply of money ans budget deficits are the significant in estimating value of stocks in South Korea, Hongkong , Singapore and Taiwan. In this study quarterly data on stocks price index, supply of money and budget deficit were used in the research. The findings were similar to the previous literatures on macroeconomies and suggest that there is a long-term relations among macro-economic policy and share price of four country. The findings suggest that the share price does not adjust fast and completely to the change in either monetary and fiscal policy in short term.

For US and Japan **Humpe and Macmillan (2007)** investigated various macro factors that can have impact on the value of share prices in the US and economy of Japan. The selected factors were industrial production, supply of money, index of consumer price and rates of interest. The statistical tools like cointegration was used to understand and find out the long run relations among the selected factors and share price in Japan &US. With the single cointegration vector for the economy of US the study found that share price was positively associated with industrial production and negatively associated with the index of consumer price & long run rates of interest. The findings suggested that thought the relations were positive but not significant among supply of money and the US. Moreover for the economy of Japan the study found cointegration of vectors. Vector influence was positive for industrial production & negative for money supply. For the next vector industrial production was found to be negative for consumer price index and interest rates.

The conflicting result can be because of collapse of economy of Japan in 1990 and resultant trap of liquidity. For the economy of Pakistan **Rizwan (2007)** applied various econometrics tools from 2000-2005 for various factors like rates of interests, exchange industrial productions, indices of consumer price & supply of money, six months LIBOR and index of Morgan Stanely and took country's world indices as global-factors. An econometric model-EGARCH found out that scrip return react in a significant manner with supply of money, index of consumer price and LIBOR, index of Morgan Stanley and VAR models found out that in Pakistan's stock markets volatility is significantly caused by supply of money , index of consumer price and LIBOR. There is insignificant while positive relations of industrial relations. It is also found that negative signs and non positive news about macro factors affects stock price more then positive news.

Similarly **Coleman (2008)**explained the relations among Ghana Stock Exchange and rate of exchange, inflation. Quarterly data was used for the period 1991-2005 using unit root test, cointegration and error correction models. Ashanti Gold field Co applied as bogus variables, interest rates, treasury bills rates. The findings showed that there are adverse effects of lending interest rates and money deposits whereas inflation have negative effects on performance of capital market. As a result of depreciation in currencies investor gets profit form looses in exchange rate. Capital market have weak but positive impact of treasury bill rates.

A significant study was conducted in this field by **Anthony Kyereboah-Coleman, Kwame F. Agyire-Tettey(2008)** who examined the influence of macro-factors on Ghana's stock exchange. The data considered was from 1991 to 2005. To find out the short & long run relations co-integration & error correction model was applied. The finding suggested that growth in business of Ghana is hinder by the lending rate of bank that adversely affect the share market performances. The rates of inflation negatively affect the share market performance as the finding suggested that time is taken for this to happen due to the lag period. Investor benefits from loss occurred due to exchange rate because of depreciating currency domestically. Previous study's of developed nations suggest that there exist definite relations among share market return & macro- factors like inflations & real output. And so for the economy of China. **Lu Soenen &Robert Johnson(2008)** studied the effect of change in consumer price indices over industrial productions and Chinese share market return. The examination of 6 varied shares of China was done from 1994 to 1998. The findings suggested that there exist linear relations among inflation s & rael outputs. The stock market of China does not have any influence of inflations. Likewise **Adam and Tweneboah (2008)**analysed effect of macro-factors over share price in stock index of data bank. The variables were index of consumer price which is used as a measure of inflation, rate of exchange were used for macro variable, foreign direct investment, rate of treasury bill as a measure of interest rate, prices of crude oil. Quarterly data was used for the period 1991-2007 using the test of cointegration, vector error correction model. The findings suggested that there cointegration among macro factors and value of share price in Ghana indicates long term relations. The study reveals that lag value of rates of interests and inflations have an important impact over share markets. Whereas, FDI, price of oil, rates of exchanges shows weaker impact on price change.

Similarly **Chen (2008)**analysed that can macro factors forecast the recession in share market. Factor like rate of interest, inflation, money stock, average output, rate of unemployment were checked on individual basis. Index of S&P 500 suggest that macro factors which was taken into consideration like yields curve spread and rates of inflation were the more important predictor of

recession in the United States share market as per sample in & sample out performance forecasting.

The aim of the study is to find out and understand in the long term of share prices with the rate of exchange and rate of inflation in the context of India. There are various studies done on finding the relations among sharfe index and macro-variables.

Kumar Paritosh (2008) examined with the help of observed methods by combination of various tools & technique to analyse the existence of cointegrations exists among share indices and other variable. Cointegrations indicate long term relations among the time series variables which are more than one. The study also applied Arima and regression statistics as per the requirement in the study. A stage by stage process was followed to find out the occurance of co-integration among the selected time series variable. The present work has considered last ten year share index of the Indian economy and index of price and rates of exchange. To establish casual relations the existence of co-integration is must. The work has triedfound out that causal relations cannot be established by avoiding the presence of co-integrations among macro factors that has been selected. The study also try to associate the technique with refined statistical software 'SAS' for all the statistics process applied. Quantitative technique was also used to explain all other variables that can effect the results of the study.

Similarly **Gilbert (2008)**investigated the connection among the macro announcement , return of intraday on the index of S&P 500 and thereafter revision were made to announce the data. This revealed that return on the day of announcement have the information's regarding revision. The information is not related to the basic announcements surprise and predict the future revision. When the revision is positive the price increase. The findings suggest that announcement of noise public information's trigger the suggestions of major correct private information's.

In the same way **Shahid Ahmed (2008)** has analyzed the relations among share price & macro factors that represents the finance & real sectors of our nation, India. Quarterly observations from 1995-2007 were considered for the study. The factors considered for the study were industrial-productions, export, FDI, supply of money, rates of exchange, rates of interests and

Nifty, Sensex as the indices. To understand and find out the long term relations co-integration and granger causality tests were used. To understand and find the short term relations impulse responses functions and BVAR were used. The findings suggested that there is a difference in casual link among macro factors and share price index in the long-term. While, there seen a similarity in both the market in the short-term. The findings indicated that share price leads to economic activities excluding movements in the interest's rates. The findings suggested that the for India share market movements are based not only on the real time performances but also by expected future performance. Finally, it can also be said that the movements in share price is not just because of the movements in macro factors but also because of the movements in various other dimensions of the economy.

For the economy of China**Liu (2008)** suggested that there is positive impact of supply of money and industrial production on share price while rate of inflation, interest and value of currency are negatively associated with the scrip price. Monthly data was used from 1992-2001. The composite index of Shenzhen and Shanghai stock exchange was considered which includes 120 observation. Cointegration and Engle granger was used which suggests that in short run capital market of China is very risky and is also variable in terms of time while in the long run findings showed that profits can occur. Likewise **Kandir (2008)** used ADF, PP to check the stationarity used data from 1997-2005 (monthly). The findings suggests that rates of interest on capital market is not unexpected as they signifies best alternative investments opportunity while supply of money, industrial production and prices of oil have insignificant effect on share return and significants impact of rate of exchange on the market of Turkey. On the same lines **Gay (2008)**used ADF on various factors like rate of exchange, price of oil for India, Brazil, China and Russia for the period 1999 to 2006, used monthly data of capital market. The findings suggests that prices of oil, rate of exchange have insignificant impact on capital market indices of Brazil, Russia, India and China. The current and previous capital markets return were because of the influence of the other macro factors which can be domestic or international on capital market return, which suggest that market of Brazil, Russia, India and China have the weak form of markets efficiencies.

In the same way **Shahid (2008)** stated the relations between the equity price and various factors such as supply of money, rate of exchange, interest, FDI and industrial production from 1995-2007, quarterly data was collected. For finding out the short run relations among the factors various statistics like Toda & Yamamoto granger causality test was employed and also used VAR madel for finding the decomposition of variance & impulse response functionsame as long run relation. Share price leads to economic activities except the interest rates. Shhare prices are lead by interest rates.share prices are the result of macro factors and it also leads to macro dimension in economy.

Likewise **Kazi (2008)**applied various econometric test like cointegration, multivariates statistics, striuctural time series, regression & auto regression dispersed lags to analyse the relations among Singapore's stocks exchange, supply of money, rates of exchange, industrial production and treasury bill rate (short term and long term), index of stock exchanges of US & JPN. Export suggest that long run relations exists among macro factors which are taken as dummy for systematic risks factor and securities market's price.

Similarly **Shahbaz (2008)**found out order of integration of variable by using DF,GLS and Ng-Perron test, bound testing technique is applied to find out long run robustness, various test like Engle, Granger and ARDL test were used to find out the kind of relations among economic growth & development of share market. The results showed that bidirectional causality exists among the share market and economic growth that suggest the existence of long run relations. Although, uni-directional causalities exist among capital market development and growth of economy, that shows that development of capital market is a significant element of economic growth. In the same way**Hoguet(2008)** suggest that increase in rates of inflation is the appropriate tool for restricting the economic policy that leads to rising of risk free rates (nominal) and which in turn increases the require rate of returns in valuation model. Moreover, rates of inflation has devastating effect on earning while using historical cost in accounting. The earning on the basis of recorded depreciation at book value is an estimation of replacement value which shows over statement of earning. Likewise FIFO i.e. first in first out system of inventory valuation results in under estimation of cost of inventory & over estimation of reported earning.

Therefore if a company is working in the climate of high inflation & if it is not in a position to pass by inflation will have to charge by it.

Similarly **International Research Journal of Finance and Economics - Issue 25 (2009) suggest** the change in share price will decrease the firms assets position & will influence the borrowing's cost. If the cost of borrowing money is high then the amount of borrowings and investments reduces and therefore the rate of growths of real gross domestic product reduces. Any changes in information's regarding upcoming rates of real gross domestic product will causes price level change in capital market. Though the explanations given suggest that price of the share is use to understand the activities of an economy in future but actually the rates gross domestic product in future causes share price in the present situation. Similarly **Rjoub (2009)** explained the relations among the Istanbul Sharemarkets and various macro factors like rate of interest , exchange, inflation, unemployment supply of mony and risk premium for the period from 2001-2005. With the help of arbitrage price theory it was found that correlation between variables and regression of portfolio finds out there is an important price relation among stock returns. Macro factors helped in explaining the important relations share return in varying portfolio. The results showed that there are various other macro-factors responsible for affecting the capital markets return in capital market of Istanbul other than those used in the study.In the same way **Mohammad (2009)** also studied about the relations among macro factors and stock indicesand the findings suggested that investigated the relationship of macro-factors with share price and reports that subsequently to 1991 economic reform, rates of foreign exchanges and reserve foreign exchanges significantly affect shares price.

For the economy of Pakistan **Sohail and Hussain (2009**) analysed the long-term & short-term relations for macro factors and share price return for the stock exchange of Lahore for the period December 2002 – June 2008. The findings suggested that inflation have a negative impact whereas money supply, industrial-productions and rates of exchanges have a positive impact on share price.

Similarly **Hasan and Javed(2009)** analysed the relations between the monetary-policies and share-market return and have used various tests like cointegrations & granger causalities. They

results reveals that there exists only single direction causality among monetary-policies factors and share markets return .A similar study in this field for the economy of Pakistan was done by **Akbar and Kundi (2009)** who studied the relations among macro-economic factors and stock exchange of Karachi (KSE). The results revealed that monetary-policy's factors and share price are cointegrated. The study also suggested that share price leads to industrial-productions and supplies of money whereas inflation lead to share price. Similarly **Hasan (2009)**observed various macro-factors like rates of exchange, interest, industrial production, inflation, supply of money, foreign investment portfolio and prices of equity for the period from 1998-2008. Various statistical tools were used like cumulative sum, cumulative sum of squares, unit-roots-test, augmented-dickey-fuller test, PP & VAR, error-corrections-models to test rate of industrial production, prices of oil and rates of inflation which are insignificant while rate of interest, exchange and supply of money are important in the long run. Short term variability of impact of price over equity is found out by the error correction models. In the short run portfolio of foreign investment have a significant impact during short-term analysis while it does not have long-term impacts in long run analysis.

For Indian economy **Sharma, Gagan Deep and Mahendru, Mandeep (2010)** analyzed longer run relations among Bombay stock exchange and macro-economic variable i.e. change in exchange rate, reserves of foreign exchanges, rates of inflation and prices of gold. The statics like multiple regression was used to find out the relations between these factors. The time period considered was 2008-2009. The findings suggested that price of gold and rate of exchange have an impact on share price while reserve of foreign exchange and rate of inflation has impact on share prices up to little extent.In the same way **Xiufang Wang (2010)** for the economy of China has analysed relations of time series data among share market volatilities and macro-factors. They used the statistics EGARCH and LAVAR. Results reveal that that there is bidirectional relations among inflation and price of stock whereas there is unilateral relations among rate of interst and price of stock. As per the findings there does not exist any important relations among stock price and gross domestic product. The findings suggested that the stock market of China is less in efficiency as compared to United States and other growing nations.

In the same way for Indian economy **Naresh Chandra Sahu, Deepinder H. Dhiman (2010)** has made an attempt to analyse the causal relations among share markets indicator and macro-factors for, they used correlations & Ganger Causality technique. Yearly data was collected for the period 1981-2006 for sensex, markets capitalizations that represents share markets, GDP and forex to understand the relations. To find out the stationarity ADF test was applied. The results revealed that there exists no causality among sensex and GDP though having high correlation. The conclusion drawn from the study revealed that sensex could not indicate the developments and growth in India. Share market is treated as a barometer to identify the economic well being a nation. Stock market indices also reflects the phase of businesses & economic cyles. The period that makes change in the share market confirms the relations among macro factors and share market movements. Therefore, movements of macro variables have an important role in affecting the share market indices. **Malarvizhi.K, Thenmozhi.R, Jaya. M (2010)** has concentrated on most macro-economic variables, the movements of Gross Domestic Product as it play an important role. The GDP indicates the reports of the performances of a nation. The continuous change that are taking place in the share market of India and in Gross Domestic Product over the last ten years has lead to many studies. They considered the observations from 2000-2010 to find out the relations among gross domestic product and indices of nifty. The findings suggested, as per cointegration and granger causality there exist bidirectional causal relations among gross domestic product and Nifty. This suggest that if there is change in the stock market it will influence the gross domestic product and vice-versa.

Likewise**SinghSaurabh, Arora V.P.S (2010)** examined the role of macro-factors on Asian share market. As India is growing at the fastest pace due to globalization and other monetary reforms. After the liberlisation Asia has become one of the largest economy's of the world. As 60% of the population of the world resides in Asia, therefore macro-economic force of Asia affect the economies of the world. For mobilization of savings and directing it for some productive purpose a capital market which is dynamic in nature is required as it indicates the financing system of any country. The working of financing markets have important relations with macro- economic force i.e. rate of inflation, rate of interest, rate of exchange, supply of money and real supply. On the basis of the stock market performance money is channelized from developed nations to Asian nations. The findings suggested the existence of correlations among Bombay stock index and

rates of interests and also among Nikkei and rate of interest, for Sensex it is greatest and the negative while for Nikkie it is positive. The results also reveal that Shanghai's index have the least amount of correlation.

Another significant work in this area was done by **Pal Karam, Mittal Ruhee, (2011)** who examined the long term relations among rate of inflation, rates of exchange and gross domestic savings for India. The study has used quarterly data from1995-2008. Various statistics like unit root, cointegration, error correction mechanism was used to find out long term & short term dynamism. The result reveal that there exists cointegration among macro factors and Indian stock index, that shows the existence of long- term relations. Error correction mechanism showed that inflation has significant effect on Bombay stock exchange and S&P CNX Nifty. Rates of Interest have significant effect only on S& P and CNX Nifty. Though rate of foreign exchange have significant effect on BSE sensex. The changed gross domestic savings is detected to have insignificant association with both i.e. Bombay stock exchange index (Sensex) and S& P CNX Nifty. The results revealed, stock markets index is depending upon macro-factors but that cannot be possible for all case. This work has examines the "information factors" or market index that influence share prices.

Fluctuations in financial market is the occurrence, which is the result of many factor and because of that, the volatilities that are not expected can result in high loss and so therefore keeping a check on its trend is required.

A recent study in this field was done by **Naliniprava Tripathy (2011)**analysed productivity of market and the casual relations among macro factors aand share market for 2005-2011 by using various econometrics statistics. The findings suggested that there exist auto correlation among stock market of India and selected macro factors which signifies that market form is Efficient market hypothesis. The results also reveal that there is bilateral relations among rate of interests, rates of exchange & share markets. BSE volume and international share markets and rates of exchanges and Bombay Stock Exchange volumes. So therefore it is clear that rates of exchange, rate of interests and market internationally has significant influence on the capital markets in the economy & gets also affected by it. The findings also suggested that there is unidirectional

causality among stock market internationally and stock market locally, rate of interest , exchange and inflation that indicates huge amount of influence in the movement of share market for the concerned period. The results reveal about the sensitivity of Indian share market to the change in dynamics of international markets.

In the same way a vital study in this area was done by **Mohammad Bayezid Ali (2011)** who analyzed the effect of Dhaka's stock exchange on micro and macro economic variable. To understand and evaluate the relationships by using multivariate model which is calculated using standard OLS statistics. The results revealed that regression coefficient showed that remittance from foreign countries and rate of inflation have negative impact and P/Es and market capitalization have positive impact on stock returns. There is 44.48% dissimilarity in the overall independent variables of Dhaka's stock exchange. There is no unidirectional granger causality among stock price and the selected factors except only one i.e. share price and market P/Es. So it can be concluded that as there is no granger causality among share price and selected micro and macro factors that shows that market is inefficient informationally.

informational inefficient market.

Inthe same way **Nopphon Tangjitporm (2011)**examined the significance of macro-factors to find out performances of the share markets. To test the relations regression statistics was used. The findings suggested that the macro-factors can describe stock returns after adjusting to the lags. However, the relations of lead and lag is checked by vector auto regression and granger causality statistic. The results also reveal that macro-factors are less significant in predicting share returns while share returns could be used to forecast macro factors. So therefore it can be said that share return is a better indicator. To understand and analyse the variance of share returns, variance decompositions techniques is used that shows that the rate of interest more significant variable. Finally it can clearly be identified that the macro-factors could express very less amount of variance in share returns.

Likewise **Govind lairellakpam and Mihir Dash (2012)** has identified the variables that effect the fluctuations in the capital market of India. The macro-factors considered for the study were prices of gold, rates of exchange, rates of interest, prices of crude oil etc. The selected variable and S&P CNX Nifty were analyzed. To test whether various variables have an important effect

on market fluctuations and also on the fluctuations of stock individually, various statistics were used like Granger causality and vector auto regression. The results revealed that no single individual factor have an important impact on the index of Nifty. Although, the results suggested thatshare market have an impact on the exchange rate.

A study of vital importance was conducted in this area by **Mohammad.Akbar, Shahid. Ali, Mohammad Faisal. Khaan(2012)** analysed the relation among Stock exchange of Karanchi and macro-factors for the time period between 1999-2008. Various tests were applied like cointegration, errors corrections and granger causality. The results revealed that share price and macro-factors are cointegrated and there exists a uni-directuional causality. The findings also revealed that share price have linear relations with supply of money and rates of interests and have negative association with inflations and reserves of foreign exchanges.

NOTEWORTHY CONTRIBUTIONS

An important work in this area has been done by **Abdulla (1993)**for the economy of United States. Although the economies of India and United states vary a lot but the statistics used in the study are very well explained. The purpose of the research is finding out the United States capital market dynamics. They have considered monthly data. Vector auto regression, granger causality, variance decomposition model has been used in the study. The results revealed thatgrowth in stocks have linear relationship with inflation while growth in stocks and money supply have negative relationship with trade deficits and budget deficits and interest rates in long and short run.

Co-integration technique was used by **Chowdhury A.R.(1995)**whoexplained the lacking of efficiency in the share market by analyzing the issues of information efficiency in the Dhaka's stock exchange. As per his views in efficient markets the security price fully reflects the information available. Bivariate relationship was checked and the findings suggested that that there is no dependency among share price and monetary aggregate. It can be said that Dhaka's stock exchange is not efficient as per the information required. The bi-variate model has failed to notice the chances of relations that are forced by another factor that acts on share price and

supply of money. Therefore, multivariate model was assessed that showed the existence of uni directional causalities from money to share prices. Although, the findings were unresponsive to the functional forms of factors utilized. Therefore, the share price is not able to point out the change in monetary policies and inefficiencies in markets.

Stock market of korea behaves differently as compared with the share markets of United States and Japan as was initated by Kwon (1999). As per the study Indian and Korean background are same from last twenty years. India and korea both the have open the barriers for foreign investment in 1991 and from then onwards both the countries are growing economically. The findings suggested that share markets are not the leading indicator of macro-economic fundamental and share markets of United States and other developed nations were more sound than stock market of Korea. For the study two index were considered viz. KOSPI & SMLS. For the first time in Korea co-integration statistic was used to study the relations among growth in stocks and macro-variables. Various statistics were applied like ADF, VECM, co-integration and Granger causality. Results revealed that there exists co-integration among share price and macro-economic factors like balance of trade, production indices, supply of money and exchange rate . Indian and Korean economies have few dissimilarities which is needed to be taken into consideration like factor 'trade balance' is not that significant for the economy of India, as India is not export oriented country just like Korea. The finding shows that there exist a long term relation and co-integration among economic-factors and share price. This piece of work is very general but then also its provides important findings for the share market of Korea .

Considering the developing economies a study was done by **Muradoglu(2000).** The study included nineteen developing economies. The purpose of this piece of work was to discover the casual-relations among growth in stocks & macro-factors. The time period considered was 1976-1997. The macro-factors considered for the study were rates of industrial production, exchange & interest. As different growing nations responds to change to basic economic-factors and stocks price in different way so therefore he reached at different conclusion for different economies. For India, the findings revealed that progress in stocks is followed by domestic productions and real sectors. Statistics of granger causality revealed that rate of exchanges were granger caused by growth in stocks. The findings also suggested that out of the nineteen considered nations only

twelve nations are casual relations with share markets. His final conclusion was the nations that accepted liberalization early became more developed than those which accepted it late.

On the same lines **Ibrahim(2003)** has studied the economy of Malaysia and worked to understand the simultaneous movements of share price in Malaysia with United States & Japan. As Malaysian economy is heavily depended on export & import and the two significant nations for exports and imports are United States & Japan. The Model used in the research work for estimating was VAR. For analyzing the relations among the considered factors, impulse response and variance decomposition were used. The work reveals the knowledge about one factor and its impact on the other factor while at the same time considering the other factors. The model of Jhonsen Cointegration was used to test co-integartion , ADF was applied to test the units root. India and Malaysia both the economies are very similar as both the economies have started with liberalization together in 90's and both the economies have grown tremendously thereafter. But then also there lies a huge difference in the economies of Malaysia nd India as Malasyia is highly export and import oriented country while India is based on the consumption. Although the statistics applied for both the nations might be similar but the kind of relations with the factors can't be same. The findings suggested that for Malaysia growth in stocks and rate of exchanges are negatively related. The findings also suggested that even after being an export oriented economy Malaysia is heavily dependent upon import. Relations among share price and consumer price index are negatively associated. During the study it was found out that share market of Malaysia is associated in positive way with United States and associated in a negative way with Japan. The comparison done with the help of co-integration, impulse responses and variance decompositions, and all the three statistics revealed the same result that there exist a very significant relations which can very well understand the dynamic relations among various factors in the long and short term

Similarly **Karamustafa O and Kucukkale Y (2003)**tried to investigate that Turkey's economic activities can explain stocks returns. For analyzing they took monthly data's of stock index and various macro-factors like supply of money, index of industrial production, rate of exchange. Various statistics were used like Johansen Juselius, Engel Granger and Granger Casuality to test

the long term relations among the factors. The findings suggested that share return is co integrated with macro factors by keeping long run equilibrium. As the results suggested that the macro-factors are not the lead indicator of share return as in the sample time period any casual relationship among factors and share return can't be found out. Whereas, share return are the lead indicator of the macro-economic performance in case of Turkey.

In the same way the findings of **Patra (2006)** suggested that there is long term & short term relations among the growth of share market and macro factors for the share market of Greece. The time period considered for the study is from 1990-1999. The factors considered for the study are stocks price, rate of inflations, rates of exchanges, volume of trade and supplies of money. The findings suggested that there is causality among every factor except rates of exchanges. The reason given by him was that during the given time period Greece joined EMU. The study used various statistics like co-integration, ECM, Granger causality & ARCH Model. These model suggested that the result are having consistency. This piece of work is very helpful to understand the relations among development of share market and macro-factors in developing nations. During 1990 the capital market for the developing nation like India and Greece faced change in their economic structure which was same in both the economies. During 1997 rate of interest decreased and the share market increased and so the investor started moving towards Share market. As the Greece entered the exchange's rates mechanism the trust of investors increased and in return stocks market moved towards its highest range. From 1990-1999 rates of inflation rose rapidly but then Government of Greece applied the control measures which in turn brought down the rates from 19.5 percent to 2.6 percent. Which lead to the enhancement of trust among investors which again made share market to reach its boom. Finally he concluded that Stocks Exchange of Athens is not efficient as macro-factors & volumes of trade are better indicators of share price.

A significant work in this area was done by **Ratanapakorn (2007)**who reached towards distinguished findings for the stock market of United States. The study selected six macro-factors like rate of interests, rate of exchange, supply of money

and rates of inflations. The findings suggested that all the six macro-economic variables did not granger cause share price. The results differ from the results of Patra(2006). The selected time period was1975-1999. Different model was used in the study like Granger causality, ADF, unit root tests, Vector error correction, GARCFI-X. There is a high degrees of co-integration among the selected factors and share prices as tested by co-integration. The chances of arbitrage increases as indicated by co-integration that causes share prices to get changed in future. Various techniques and tool were used in this study to find out long and short run relations.

Similarly **Md. Nehal Ahmed and Mahmood Osman Imam (2007)** investigated Bangladesh's stock market and tried to find out that stock returns in long term can be explained with the help of co-integration and short term dynamics by vector error corrections model. Causality was also tested on share price return. The finding suggest that the Bangladesh's capital market do not predict macro-factors impact on index of share price. The findings also showed that statistics like vector error correction model & co integration suggest that index of capital market do not co integrate with the selected macro factors. The results also suggest that co integration is not there among share markets growth and macro factors may be because of the less deep Bangladesh's capital market. Whereas, out of the selected macro factors treasury bill's rate of growth may have the impact over market returns. They also suggested that with the occurrence of change share market should also react to the change else investors will shift from capital market to money market or to some another place seeking to the high opportunity cost. Although, the results depicts that interest rate granger causes share markets return in a unidirectional way that suggest that index of share market is not a lead indicator for the economic variables. Interest rate changes depicts the inefficiency of market.

The previous discussion declared that most of studies focused on developed economy while there is lack of studies regarding emerging economies like India . This shows the gap that this research sheds light on. The review also concluded that findings vary from one country to another, which emphasizes the importance of examining the relationship between macroeconomic variables and stock market in each country as the findings cannot be generalized.

3.2 Objectives

The main objectives of the study were worked out based on the detailed understanding of research problem, after thoroughly reviewing the relevant literature in such a way that satisfaction of all objectives will generate the answer to the main problem of this study.

Main objective

The prime object of the research was to discover the inter-relationship among macro-economic variables and capital market.

Other objectives

- To investigate the impact of GDP on capital market movements.
- To find the effect of interest-rate on capital-market movement.
- To investigate the impacts of inflation-rate on capital-market movement.
- To investigate the effect of growth- rate of industrial-production on stock-market movement.
- To find out the effect of money supply on stock-market movement.
- To know the effect of export on capital-market movement.
- To know the impact of import on capital-market movement.
- To find out the impacts of fiscal deficit on capital-market movement.

3.3 Hypotheses Framed

Ho1- There is no significant-impact of GDP over capital-market movement.

Ho2- There is no significant-impact of interest rate on capital-market movement.

Ho3- There is no significant-impact of inflation rate on capital-market movement.

Ho4- There is no significant-impact of industrial production growth-rate on capital-market movement.

Ho5- There is no significant-impact of fiscal deficit on capital-market movement.

Ho6- There is no significant-impact of money supply on capital-market movement.

Ho7- There is no significant-impact of export on capital-market movement.

Ho8- There is no significant-impact of import rate on capital-market movement.

CHAPTER-4
RESEARCH METHODOLOGY

4.1 Research Design

The main objective of this research work is ensuring the accuracy in empirical evidences are obtained which can interpret and find out whether the research propositions that are set for the study can confidently be accepted or rejected. For testing the proposition, basically quantitative research techniques were applied by the use of multiple measures. To analyze the relations among the factors, the research approach took the form of empirical quantitative design.

The methodological approach to this study was essentially descriptive in nature. Descriptive research is also called statistical research. The main goal of this type of research is to describe the data and characteristics about what is being studied.

4.2 The Study

The nature of the research design is descriptive. Its focus is to investigate the effect of macro-factors over stock market. The selected macro-factors for this purpose are GDP, rates of interests, inflation , growth-rate of industrial-production, fiscal deficit, money supply, exports and imports. For the purpose of statistical analysis the index of Nifty - 50 for the time period 2000-2019 has been considered. The basis of this research study is secondary in nature. The quarter price of the selected macro-economic factors and Nifty-50 index has been taken.

4.3 Sample Design

4.3.1Sample population

The research contained all the companies and firms listed in Nifty-50 for the period 2000-2019.

4.3.2 Sampling Frame

Sampling frame consisted of the Nifty-50 index for the period 2000-2019, along with the eight macro-economic factors of Indian economy namely GDP, inflation, rate of interest, industrial-production growth-rate, fiscal deficit, money supply, exports and imports.

4.3.3 Sample Size

Index of Nifty-50 during 1999-2019.

4.3.4 Sampling Element

The companies listed in National Stock Exchange in Nifty- 50 index during 2000-2019.

4.3.5 Sampling-Technique

Non-probability judgment sampling techniques was applied.

4.4 Tools for Data Collection

Secondary data sources were used to collect the data i.e BSE and reserve bank of India website. Besides this, the relevant secondary data have also been collected from National Stock Exchange, official directory, company's publications, annual survey of the industry, reports on currency and finance, libraries of various research institutions, through internet. Personal interviews were conducted of officers working with various public and private sectors banks, insurance companies, asset management companies, stock brokers and sub brokers and officers of various financial institutions in order to collect the data regarding the understanding of Indian financial capital market.

4.5 Tools for Data Analysis

Data has been obtained for various macro-economic factors of the Indian economy (GDP, inflation, interest rates, industrial production growth rate, fiscal deficit, money supply, exports and imports) from reserve bank of India.com. Quarterly data have been collected for Nifty-50 index and selected macro-economic factors.

- ADF statistic was used to check the stationarity of the data.
- Bi-variate correlations was used to check the relations among the macro- economic factors as well as with the nifty-50 index.

- Granger-Causality was tested to check the presence of relations among the factors and Nifty-50..
- By applying linear-regression, cause and effect relations among selected macro-economic factors (GDP, inflation, interest rates, industrial production growth rate, fiscal deficit, money supply, exports and imports) as independent factors and stock index as dependent factor were established.

CHAPTER-5
RESULTS

5. RESULTS

In this chapter, results from statistical analysis and outcomes of hypothesis are presented. In this section to test the stationarity results of Augmented Dickey Fuller test along with granger causality to analyze the dynamic linkages among macro economic factors & index of Nifty-50. Along with this results of descriptive Statistics and bivariate correlation between macro economic factors and index of Nifty-50 is reported. The subsequent section reports the relations among dependent and independent factors by applying linear regression between macro economic factors such as GDP, inflation, lending interest rates, industrial production growth rate, fiscal deficit, money supply, exports, imports.

For getting the useful inference, stationery data must form the basis of time series analysis. In a data series if the values of means & variance are not changing and is constant and the covariance's value in the said period of time is only dependent upon distances and lags and not dependent upon the real time in which the computation of covariance's are done, otherwise such data sets are said to be stationery. The correlation among data series and the lag value is presumed to be dependent only on lag length. This is known as stationary and a series following it is known as stationery data series. Unit-root statistic was used to find out that a series have stationery conditions or doesn't have stationery conditions. ADF statistic is used to test the stationary condition.

5.1 Augmented Dickey Fuller Test

In this study various test were used amongst those was the Augmented Dickey Fuller test, that is the new form of Dickey Fuller test. It deals in correcting the parametric nature of the real dickey fuller test for getting high level correlations and assumes that a sequence follow an AR process. It helps in controlling the high orders of correlations with the addition of lag difference of the

dependent variables to the right side of the regressions. The specification applied for the ADF is as follow:

$\Delta y_t = \alpha_0 + \lambda y_{t-1} + \sum_{i=1}^{p} y_i \Delta y_{t-i} + u_i$

To understand that is there the existence of long-term relations among share market of India and macro-factors like gdp, inflation, lending interest rate, industrial production growth rate, fiscal deficit, trade deficit, exports, imports Augmented Dickey Fuller test have been applied. Prior to the discussion on the results it is essential to have a discussion on the two variables that when the are having co-integration and when not. Two variables are in co-integration when the two time series cannot wander off in the opposite direction for very long for very long without coming back to mean distance eventually. But that doesn't mean that on a daily basis the two series have to move in synchrony at all. When two series are not co-integrated it implies that two time series can wander off in opposite directions for very long without coming back to mean distance finally.

Therefore, understanding whether a series is stationery or not a proper test is required. In the first place, nine factors were tested including dependent and independent both variables i.e. dependent variable Nifty-50 and independent variables GDP, inflation rate, interest rate, industrial production growth rate, money supply, fiscal deficit, exports and money supply.

Table : 1.1

Augmented Dickey Fuller Test of Nifty-50

Null Hypothesis: D(DDNIFTY,2) has a unit root
Exogenous: Constant
Lag Length: 11 (Automatic - based on SIC, maxlag=11)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-6.103010	0.0000
Test critical values:	1% level	-3.536587	
	5% level	-2.907660	

10% level	-2.591396	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(DDNIFTY,3)
Method: Least Squares
Date: 12/03/19 Time: 11:33
Sample (adjusted): 17 80
Included observations: 64 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(DDNIFTY(-1),2)	-31.61299	5.179902	-6.103010	0.0000
D(DDNIFTY(-1),3)	28.69888	5.091469	5.636661	0.0000
D(DDNIFTY(-2),3)	25.85174	4.881490	5.295870	0.0000
D(DDNIFTY(-3),3)	22.33920	4.513733	4.949163	0.0000
D(DDNIFTY(-4),3)	18.39129	3.995784	4.602674	0.0000
D(DDNIFTY(-5),3)	14.26172	3.356822	4.248578	0.0001
D(DDNIFTY(-6),3)	10.37538	2.651722	3.912694	0.0003
D(DDNIFTY(-7),3)	6.949473	1.946072	3.571026	0.0008
D(DDNIFTY(-8),3)	4.257765	1.301203	3.272176	0.0019
D(DDNIFTY(-9),3)	2.271352	0.762607	2.978405	0.0044
D(DDNIFTY(-10),3)	0.980871	0.365575	2.683089	0.0098
D(DDNIFTY(-11),3)	0.222452	0.118125	1.883184	0.0654
C	0.001242	0.016572	0.074963	0.9405

R-squared	0.959660	Mean dependent var	0.005035
Adjusted R-squared	0.950168	S.D. dependent var	0.591751
S.E. of regression	0.132097	Akaike info criterion	-1.031361
Sum squared resid	0.889937	Schwarz criterion	-0.592838
Log likelihood	46.00354	Hannan-Quinn criter.	-0.858604
F-statistic	101.1032	Durbin-Watson stat	2.056172
Prob(F-statistic)	0.000000		

As indicated from the above table that while testing the stationarity for the Nifty-50, the dependent variable got stationery at the II difference at intercept. As the probability value is 0, t statistic is -6.103010 and the value of Durbin Watson is 2.056172. As the value of Durbin Watson comes near to 2 and probability values came to be 0, so therefore it got stationery at II difference at intercept.

Table: 1.2

Augmented Dickey Fuller Test of GDP

Null Hypothesis: D(DDGDP,2) has a unit root
Exogenous: Constant
Lag Length: 9 (Automatic - based on SIC, maxlag=11)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-6.618022	0.0000
Test critical values:	1% level	-3.533204	
	5% level	-2.906210	
	10% level	-2.590628	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(DDGDP,3)
Method: Least Squares
Date: 12/03/19 Time: 11:35
Sample (adjusted): 15 80
Included observations: 66 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(DDGDP(-1),2)	-29.28513	4.425059	-6.618022	0.0000
D(DDGDP(-1),3)	25.96124	4.341102	5.980335	0.0000
D(DDGDP(-2),3)	22.42259	4.090833	5.481180	0.0000
D(DDGDP(-3),3)	18.15378	3.639040	4.988619	0.0000
D(DDGDP(-4),3)	13.59815	3.021740	4.500105	0.0000
D(DDGDP(-5),3)	9.242436	2.307670	4.005095	0.0002
D(DDGDP(-6),3)	5.543025	1.583411	3.500687	0.0009
D(DDGDP(-7),3)	2.801706	0.935076	2.996234	0.0041
D(DDGDP(-8),3)	1.108297	0.432724	2.561208	0.0132
D(DDGDP(-9),3)	0.271017	0.126814	2.137121	0.0371
C	-0.007217	0.098601	-0.073197	0.9419

R-squared	0.974874	Mean dependent var	-0.016660
Adjusted R-squared	0.970305	S.D. dependent var	4.648027
S.E. of regression	0.800954	Akaike info criterion	2.544985
Sum squared resid	35.28399	Schwarz criterion	2.909927
Log likelihood	-72.98451	Hannan-Quinn criter.	2.689191
F-statistic	213.3949	Durbin-Watson stat	2.095043
Prob(F-statistic)	0.000000		

As indicated from the above table that while testing the stationarity for the GDP (independent variable), the independent variable got stationery at the II difference at intercept. As the probability value is 0, t statistic is -6.618022and the value of Durbin Watson is 2.095043. As the value of Durbin Watson comes near to 2 and probability values came to be 0, so therefore it got stationery at II difference at intercept.

Table: 1.3

Augmented Dickey Fuller Test of Inflation

Null Hypothesis: D(DDINFLATION,2) has a unit root
Exogenous: Constant
Lag Length: 11 (Automatic - based on SIC, maxlag=11)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-7.703702	0.0000
Test critical values:	1% level	-3.536587	
	5% level	-2.907660	
	10% level	-2.591396	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(DDINFLATION,3)
Method: Least Squares
Date: 12/03/19 Time: 11:53
Sample (adjusted): 17 80
Included observations: 64 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(DDINFLATION(-1),2)	-26.85738	3.486295	-7.703702	0.0000
D(DDINFLATION(-1),3)	23.60833	3.398117	6.947475	0.0000
D(DDINFLATION(-2),3)	20.47878	3.182416	6.434977	0.0000
D(DDINFLATION(-3),3)	16.84658	2.840254	5.931362	0.0000
D(DDINFLATION(-4),3)	13.12892	2.399785	5.470871	0.0000
D(DDINFLATION(-5),3)	9.672957	1.908579	5.068147	0.0000
D(DDINFLATION(-6),3)	6.685195	1.415952	4.721342	0.0000
D(DDINFLATION(-7),3)	4.265115	0.964427	4.422434	0.0001
D(DDINFLATION(-8),3)	2.424981	0.586155	4.137098	0.0001
D(DDINFLATION(-9),3)	1.168362	0.301584	3.874091	0.0003
D(DDINFLATION(-10),3)	0.433589	0.120116	3.609755	0.0007
D(DDINFLATION(-11),3)	0.087116	0.029451	2.958034	0.0047
C	0.005286	0.037601	0.140569	0.8888

R-squared	0.997571	Mean dependent var	0.444142
Adjusted R-squared	0.997000	S.D. dependent var	5.408055
S.E. of regression	0.296230	Akaike info criterion	0.583829
Sum squared resid	4.475352	Schwarz criterion	1.022352
Log likelihood	-5.682527	Hannan-Quinn criter.	0.756585
F-statistic	1745.534	Durbin-Watson stat	2.329992
Prob(F-statistic)	0.000000		

As indicated from the above table that while testing the stationarity for the inflation (independent Variable), the independent variable got stationery at the II difference at intercept. As the probability value is 0, t statistic is -7.703702and the value of Durbin Watson is 2.329992. As the value of Durbin Watson comes near to 2 and probability values came to be 0, so therefore it got stationery at II difference at intercept.

Table: 1.4

Augmented Dickey Fuller Test of Money Supply

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(DMONEYSUPPLY,2)
Method: Least Squares
Date: 12/03/19 Time: 11:51
Sample (adjusted): 9 80
Included observations: 72 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(DMONEYSUPPLY(-1))	-6.368333	0.905920	-7.029684	0.0000
D(DMONEYSUPPLY(-1),2)	4.091563	0.825986	4.953549	0.0000
D(DMONEYSUPPLY(-2),2)	2.792345	0.676692	4.126461	0.0001
D(DMONEYSUPPLY(-3),2)	1.667715	0.487322	3.422202	0.0011
D(DMONEYSUPPLY(-4),2)	0.809144	0.290379	2.786508	0.0070
D(DMONEYSUPPLY(-5),2)	0.247367	0.119873	2.063574	0.0431
C	130.3270	302.8447	0.430343	0.6684

R-squared	0.887788	Mean dependent var	0.619444
Adjusted R-squared	0.877429	S.D. dependent var	7318.256
S.E. of regression	2562.127	Akaike info criterion	18.62723
Sum squared resid	4.27E+08	Schwarz criterion	18.84857
Log likelihood	-663.5802	Hannan-Quinn criter.	18.71535
F-statistic	85.70971	Durbin-Watson stat	2.098926
Prob(F-statistic)	0.000000		

As indicated from the above table that while testing the stationarity for the money supply (independent variable), the independent variable got stationery at the I difference at intercept. As

the probability value is 0, t statistic is -7.029684and the value of Durbin Watson is 2.098926. As the value of Durbin Watson comes near to 2 and probability values came to be 0, so therefore it got stationery at I difference at intercept.

Table:1.5

Augmented Dickey Fuller Test of Imports

Null Hypothesis: D(DDIMPORTS,2) has a unit root
Exogenous: Constant
Lag Length: 8 (Automatic - based on SIC, maxlag=11)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-7.310863	0.0000
Test critical values:	1% level	-3.531592	
	5% level	-2.905519	
	10% level	-2.590262	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(DDIMPORTS,3)
Method: Least Squares
Date: 12/03/19 Time: 11:55
Sample (adjusted): 14 80
Included observations: 67 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(DDIMPORTS(-1),2)	-21.77649	2.978649	-7.310863	0.0000
D(DDIMPORTS(-1),3)	18.66554	2.884150	6.471765	0.0000
D(DDIMPORTS(-2),3)	15.75283	2.644057	5.957825	0.0000
D(DDIMPORTS(-3),3)	12.38937	2.258644	5.485310	0.0000
D(DDIMPORTS(-4),3)	9.005865	1.783154	5.050525	0.0000
D(DDIMPORTS(-5),3)	5.825193	1.279438	4.552931	0.0000
D(DDIMPORTS(-6),3)	3.149402	0.795693	3.958063	0.0002
D(DDIMPORTS(-7),3)	1.295122	0.394367	3.284054	0.0018
D(DDIMPORTS(-8),3)	0.291434	0.124518	2.340495	0.0228
C	-0.004137	0.012488	-0.331329	0.7416

R-squared	0.964295	Mean dependent var	-0.008236
Adjusted R-squared	0.958657	S.D. dependent var	0.502021
S.E. of regression	0.102076	Akaike info criterion	-1.589331
Sum squared resid	0.593913	Schwarz criterion	-1.260272
Log likelihood	63.24259	Hannan-Quinn criter.	-1.459122
F-statistic	171.0438	Durbin-Watson stat	2.000473
Prob(F-statistic)	0.000000		

As indicated from the above table that while testing the stationarity for imports (independent variable), the independent variable got stationery at the II difference at intercept. As the

probability value is 0, t statistic is -7.310863and the value of Durbin Watson is 2.000473. As the value of Durbin Watson comes near to 2 and probability values came to be 0, so therefore it got stationery at I difference at intercept.

Table: 1.6

Augmented Dickey Fuller Test of Exports

Null Hypothesis: D(DEXPORT) has a unit root
Exogenous: Constant
Lag Length: 2 (Automatic - based on SIC, maxlag=11)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-8.744536	0.0000
Test critical values:	1% level	-3.520307	
	5% level	-2.900670	
	10% level	-2.587691	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(DEXPORT,2)
Method: Least Squares
Date: 12/03/19 Time: 11:57
Sample (adjusted): 6 80
Included observations: 75 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(DEXPORT(-1))	-2.519142	0.288082	-8.744536	0.0000
D(DEXPORT(-1),2)	0.764303	0.215590	3.545177	0.0007
D(DEXPORT(-2),2)	0.304850	0.110763	2.752285	0.0075
C	-0.001433	0.008757	-0.163671	0.8705

R-squared	0.809196	Mean dependent var	-0.001978
Adjusted R-squared	0.801134	S.D. dependent var	0.169998
S.E. of regression	0.075810	Akaike info criterion	-2.269328
Sum squared resid	0.408043	Schwarz criterion	-2.145728
Log likelihood	89.09979	Hannan-Quinn criter.	-2.219976
F-statistic	100.3699	Durbin-Watson stat	2.138616
Prob(F-statistic)	0.000000		

As indicated from the above table that while testing the stationarity for exports (independent variable), the independent variable got stationery at the II difference at intercept. As the probability value is 0, t statistic is -8.744536and the value of Durbin Watson is 2.138616. As the value of Durbin Watson comes near to 2 and probability values came to be 0, so therefore it got stationery at II difference at intercept.

Table: 1.7

Augmented Dickey Fuller Test of Industrial Production Growth Rate

Null Hypothesis: D(DDINDPROD,2) has a unit root
Exogenous: Constant
Lag Length: 8 (Automatic - based on SIC, maxlag=11)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-7.468876	0.0000
Test critical values:	1% level	-3.531592	
	5% level	-2.905519	
	10% level	-2.590262	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(DDINDPROD,3)
Method: Least Squares
Date: 12/03/19 Time: 11:58
Sample (adjusted): 14 80
Included observations: 67 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(DDINDPROD(-1),2)	-36.50115	4.887102	-7.468876	0.0000
D(DDINDPROD(-1),3)	32.69662	4.788393	6.828308	0.0000
D(DDINDPROD(-2),3)	27.87264	4.470763	6.234427	0.0000
D(DDINDPROD(-3),3)	21.48299	3.862560	5.561853	0.0000
D(DDINDPROD(-4),3)	14.54692	3.002537	4.844875	0.0000
D(DDINDPROD(-5),3)	8.396814	2.035170	4.125854	0.0001
D(DDINDPROD(-6),3)	3.963462	1.151463	3.442110	0.0011
D(DDINDPROD(-7),3)	1.383657	0.498114	2.777792	0.0074
D(DDINDPROD(-8),3)	0.248263	0.130856	1.897217	0.0629
C	0.011664	0.154277	0.075607	0.9400

R-squared	0.988544	Mean dependent var	0.181192
Adjusted R-squared	0.986735	S.D. dependent var	10.95019
S.E. of regression	1.261167	Akaike info criterion	3.438817
Sum squared resid	90.66084	Schwarz criterion	3.767876
Log likelihood	-105.2004	Hannan-Quinn criter.	3.569027
F-statistic	546.5071	Durbin-Watson stat	2.034309
Prob(F-statistic)	0.000000		

As indicated from the above table that while testing the stationarity for industrial production growth rate (independent variable), the independent variable got stationery at the II difference at

intercept. As the probability value is 0, t statistic is -7.468876and the value of Durbin Watson is 2.034309. As the value of Durbin Watson comes near to 2 and probability values came to be 0, so therefore it got stationery at II difference at intercept.

Table: 1.8

Augmented Dickey Fuller Test of Fiscal Deficit

Null Hypothesis: D(DFISCALDEFICIT) has a unit root
Exogenous: Constant
Lag Length: 2 (Automatic - based on SIC, maxlag=11)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-9.620621	0.0000
Test critical values:	1% level	-3.520307	
	5% level	-2.900670	
	10% level	-2.587691	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(DFISCALDEFICIT,2)
Method: Least Squares
Date: 12/03/19 Time: 12:00
Sample (adjusted): 6 80
Included observations: 75 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(DFISCALDEFICIT(-1))	-2.760222	0.286907	-9.620621	0.0000
D(DFISCALDEFICIT(-1),2)	0.966852	0.213736	4.523577	0.0000
D(DFISCALDEFICIT(-2),2)	0.380111	0.112387	3.382156	0.0012
C	0.000500	0.011630	0.043011	0.9658

R-squared	0.811177	Mean dependent var	0.001600
Adjusted R-squared	0.803199	S.D. dependent var	0.226945
S.E. of regression	0.100678	Akaike info criterion	-1.701919
Sum squared resid	0.719662	Schwarz criterion	-1.578319
Log likelihood	67.82194	Hannan-Quinn criter.	-1.652567
F-statistic	101.6713	Durbin-Watson stat	2.107118
Prob(F-statistic)	0.000000		

As indicated from the above table that while testing the stationarity for fiscal deficit (independent Variable), the independent variable got stationery at the I difference at intercept. As the

probability value is 0, t statistic is -9.620621and the value of Durbin Watson is 2.107118. As the value of Durbin Watson comes near to 2 and probability values came to be 0, so therefore it got stationery at I difference at intercept.

Table: 1.9

Augmented Dickey Fuller Test of Interest

Null Hypothesis: D(DDINTEREST,2) has a unit root
Exogenous: Constant
Lag Length: 10 (Automatic - based on SIC, maxlag=11)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-6.331974	0.0000
Test critical values:	1% level	-3.534868	
	5% level	-2.906923	
	10% level	-2.591006	

*MacKinnon (1996) one-sided p-values.

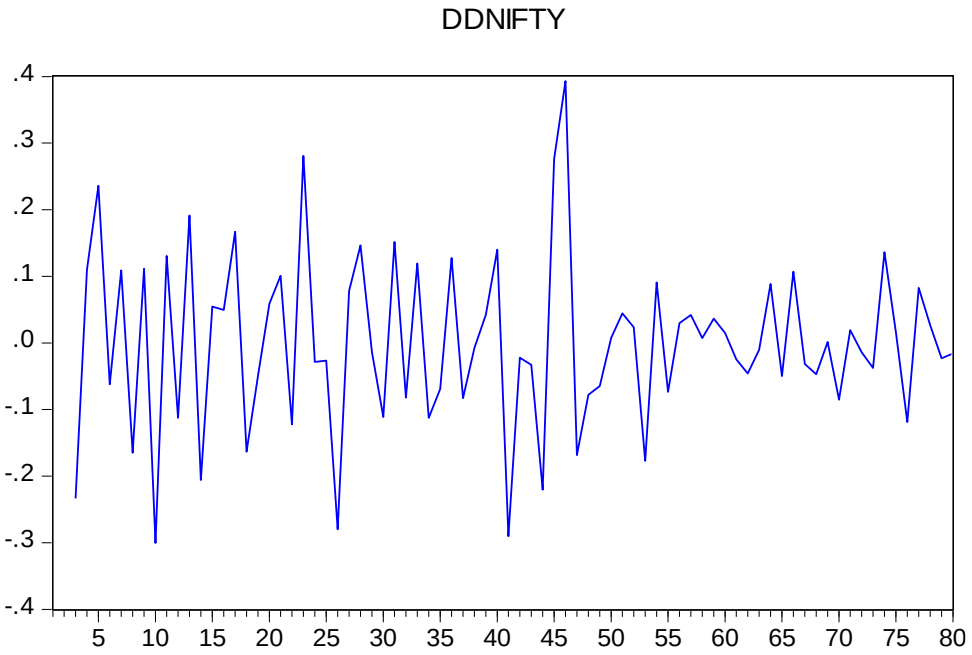
Augmented Dickey-Fuller Test Equation
Dependent Variable: D(DDINTEREST,3)
Method: Least Squares
Date: 12/03/19 Time: 12:02
Sample (adjusted): 16 80
Included observations: 65 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(DDINTEREST(-1),2)	-37.69152	5.952570	-6.331974	0.0000
D(DDINTEREST(-1),3)	34.30380	5.870418	5.843503	0.0000
D(DDINTEREST(-2),3)	30.55564	5.617703	5.439169	0.0000
D(DDINTEREST(-3),3)	25.75268	5.143120	5.007210	0.0000
D(DDINTEREST(-4),3)	20.27438	4.449464	4.556588	0.0000
D(DDINTEREST(-5),3)	14.67428	3.578908	4.100212	0.0001
D(DDINTEREST(-6),3)	9.689166	2.631687	3.681732	0.0005
D(DDINTEREST(-7),3)	5.784345	1.736051	3.331899	0.0016
D(DDINTEREST(-8),3)	2.964799	0.991441	2.990393	0.0042
D(DDINTEREST(-9),3)	1.200605	0.449464	2.671193	0.0100
D(DDINTEREST(-10),3)	0.301372	0.129506	2.327089	0.0238
C	0.001146	0.106399	0.010766	0.9914

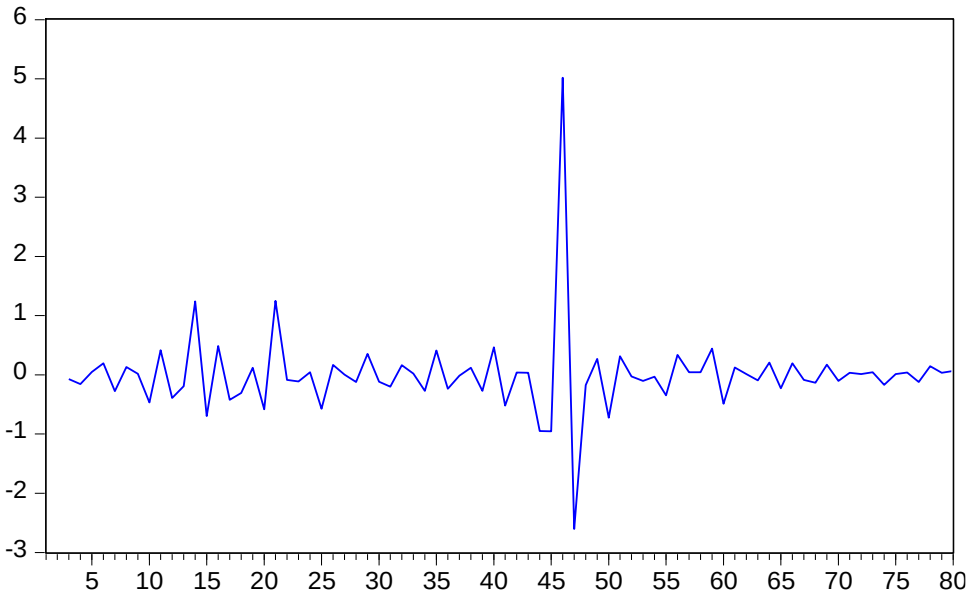
R-squared	0.976829	Mean dependent var	0.005538
Adjusted R-squared	0.972020	S.D. dependent var	5.127714
S.E. of regression	0.857727	Akaike info criterion	2.696074
Sum squared resid	38.99189	Schwarz criterion	3.097500
Log likelihood	-75.62242	Hannan-Quinn criter.	2.854462
F-statistic	203.1210	Durbin-Watson stat	2.021494
Prob(F-statistic)	0.000000		

As indicated from the above table that while testing the stationarity for interest (independent Variable), the independent variable got stationery at the II difference at intercept. As the probability value is 0, t statistic is -6.331974 and the value of Durbin Watson is 2.021494. As the value of Durbin Watson comes near to 2 and probability values came to be 0, so therefore it got stationery at II difference at intercept.

Graphs



DDGDP



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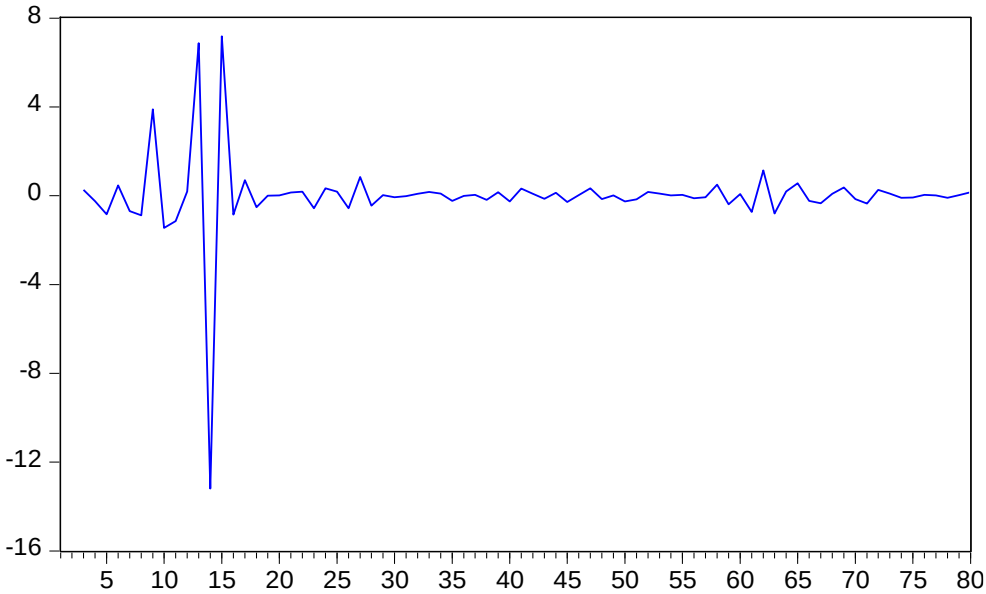
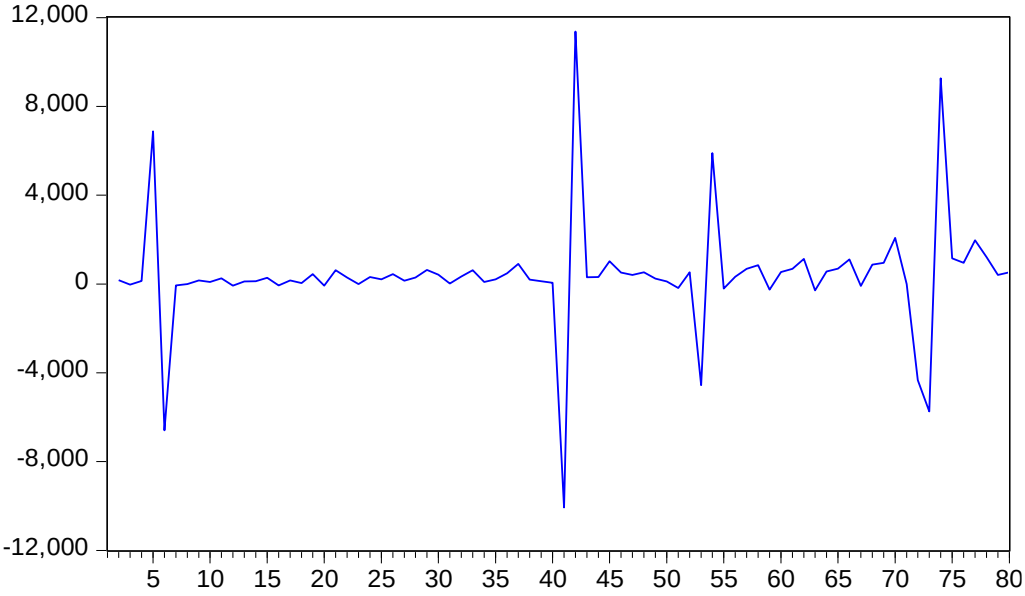
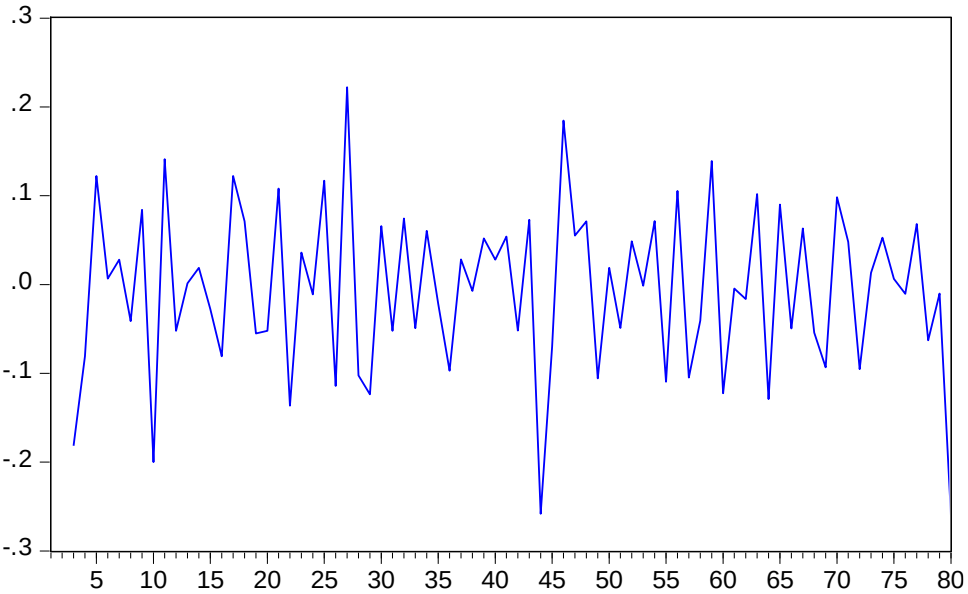


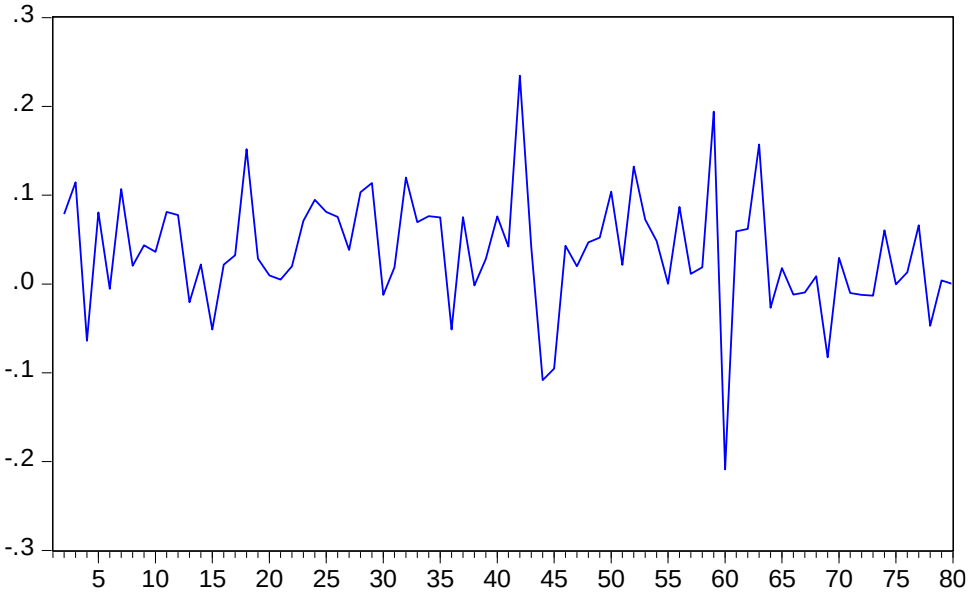
DMONEYSUPPLY



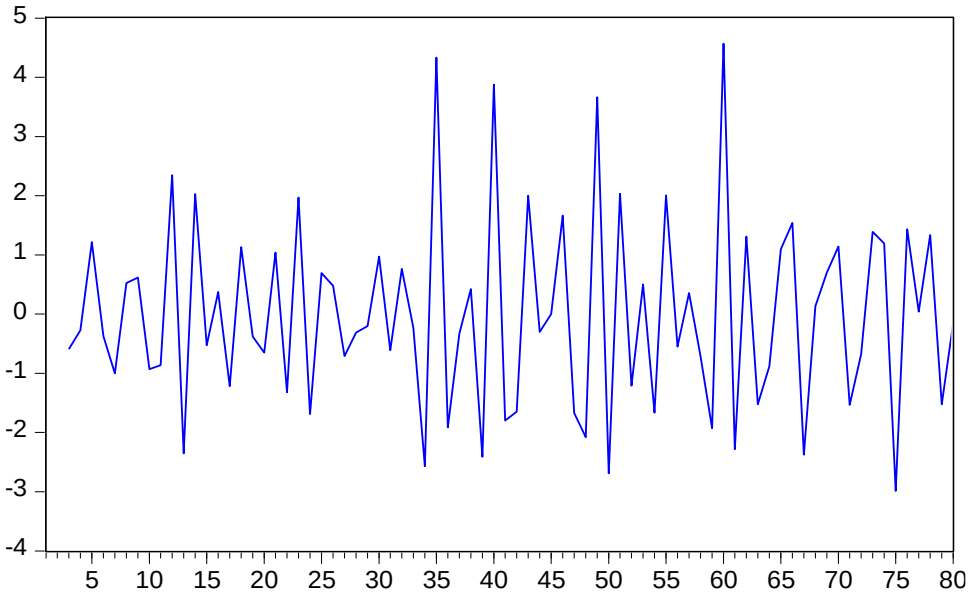
DDIMPORTS



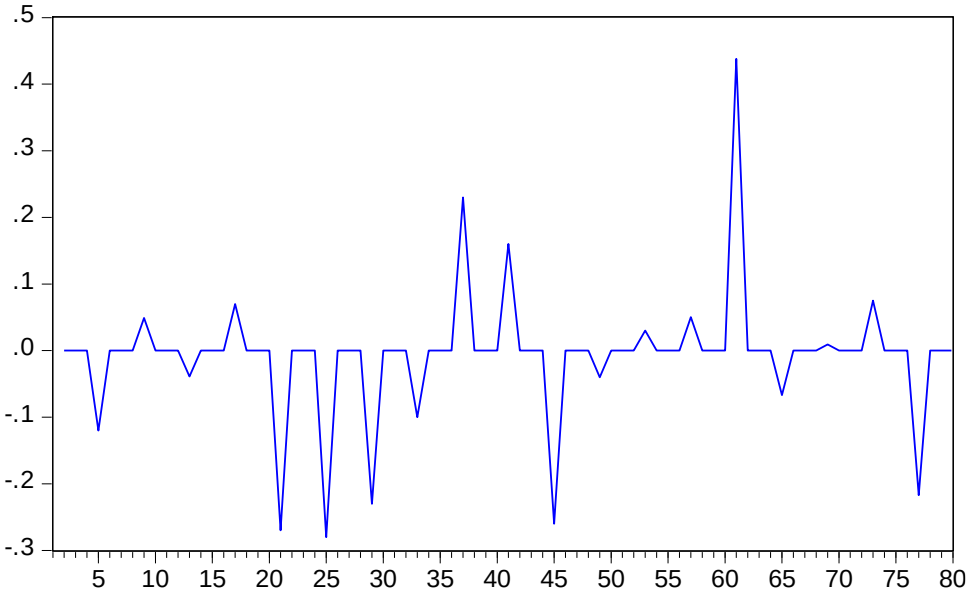
DEXPORT



DDINDPROD



DFISCALDEFICIT



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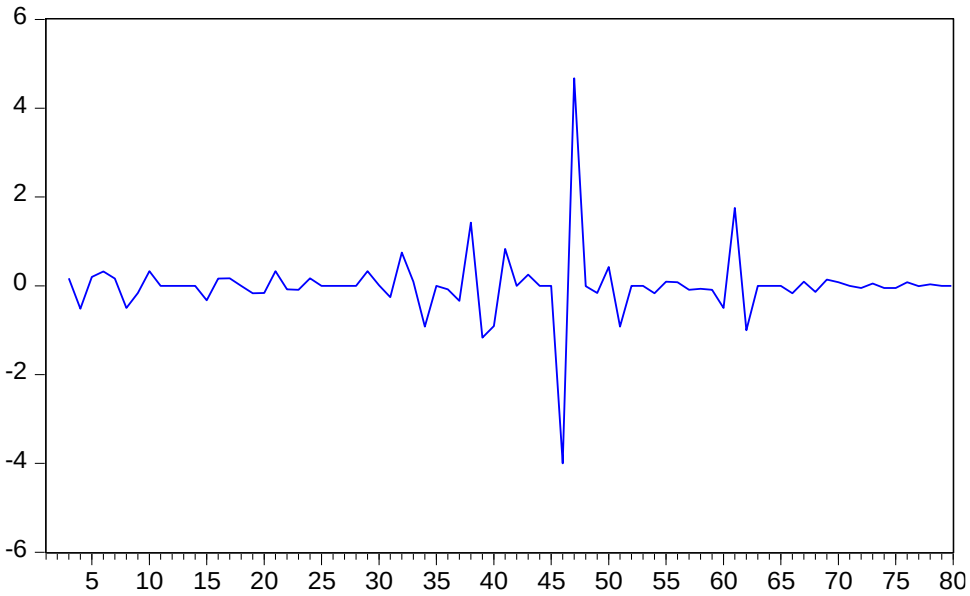

5.2 Correlation

An important work of statistic is to compare varying set of information related with varying things among which there can be some connections. To deal with such kind of question is known as correlation statistically. A connection of superficial type among the varying value in one data set and in second data set such that as the value of first data set increase, the value of second data set also increases or vice versa to decrease.

To consider correlation we have three different possibility. The data set can show positive correlation, means that when the value of first data set increases the value of second data set also increases. The two data sets can also show negative correlations, means that when the value of first data set increases the value of second data set decreases. There can be no correlation means that the two data sets does not have any relations. Correlations could also be weak or strong means that the kind of relations among the two data sets significant or slight. Correlations can be perfect means that any change in one data set have exactly similar change in the another data set. Correlations is a very significant tool that enable us to find out such claim so that we can understand, they are correct or not and if they are correct then what are the strengths of the relations.

Bivariate Correlation Between Macro Economic Factors of the Indian Economy

Pearson's r^2 is the present of variance in the dependent explained by the given independent when (unlike beta weights) all other independents are allowed to vary. The result is that the magnitude of r^2 reflects not only the unique covariance it shares with the dependent, but uncontrolled effects on the dependent attributable to covariance the given independent shares with other independents. In this study the bivariate correlation is used to find out the linear relations between macro-factors for the economy of India and index of nifty-50 for the period 1999-2019.

Table showing Bivariate Correlation between Nifty and Macro Economic Factors of the Indian economy.

Table: 2.1

		Nifty	GDP	Inflation	Interest	Industrial Production	Money Supply	Fiscal Deficit	Export	Import
Nifty	Pearson Correlation Sig.(2 tailed)	1	397** 000	.168 .137	-.204 . 070	.156 .168	.356** .001	.519** .001	.695** .000	.996** .000
GDP	Pearson Correlation Sig.(2 tailed)	.397** .000	1	-.140 .214	-.064 .571	-.551** 0	.135 .233	.029 .798	.254* .023	.384** 0
Inflation	Pearson Correlation Sig.(2 tailed)	.168 .137	-.140 .214	1	-.027 .814	-.002 .986	.054 .632	.127 .263	.114 .316	.147 .193
Interest	Pearson Correlation Sig.(2 tailed)	-.204 .070	-.064 .571	-.027 .814	1	-.029 .802	-.703** .000	-.108 .338	-.136 .228	-.202 .072
Industrial Production	Pearson Correlation Sig.(2 tailed)	.156 .168	-.551** .000	-.002 .986	-.029 .802	1	.068 .548	.197 .080	.109 .338	.184 .103
Money Supply	Pearson Correlation Sig.(2 tailed)	.356** .001	.135 .233	.054 .632	-.703** .000	.068 .548	1	.245* .028	.235* .036	.351** .001
Fiscal Deficit	Pearson Correlation Sig.(2 tailed)	.519** .000	.029 .798	.127 .263	-.108 .338	.197 .080	.245* .028	1	.733** .000	.510** .000
Export	Pearson Correlation Sig.(2 tailed)	.695** 000	.254* .023	.114 .316	-.136 .228	.109 .338	.235* .036	.733** .000	1	.686** .000
Import	Pearson Correlation Sig.(2 tailed)	.996** .000	.384** .000	.147 .193	-.202 .072	.184 .103	.351** .001	.510** .000	.686** .000	1

The bivariate correlation reported between Nifty-50 and GDP is statistically not significant as the value is 0.397 which should have significance at 0. Therefore it is suggested that Nifty-50 and GDP does not have any kind of association. In the same way for correlation reported between

Nifty-50 and inflation rates for India is insignificant statistically because pearson coefficient correlation's value is .168 that should have significance at .13%. Therefore it is suggested that Nifty-50 and inflation does not have any kind of association. Likewise correlation reported between Nifty-50 and interest rates for India is significant statistically because pearson coefficient correlation's value is -.0.204 that should have significance at 70%. Therefore it is suggested that there is negative correlation among Nifty-50 and Interests rates. Similarly correlation reported between Nifty-50 and Industrial Production of India is significant statistically as the value of pearson coefficient-correlation is 0.156 which should have significance at .16%. Therefore it is suggested Nifty -50 and Industrial Production does not have any kind of association. Likewise correlation reported between Nifty-50 and Money-Supply of India is insignificant as the value of pearson-coefficient-correlation is 0.356 that should have significance at 0. Therefore it is suggested that Nifty-50 and Money Supply does not have any kind of association. In the same way correlation reported between Nifty-50 and fiscal deficit of India insignificant as the value of pearson-coefficient-correlation is.519 that should have significance at 0. Therefore it is suggested that there is no association exists between Nifty-50 and fiscal deficit. Likewise correlation reported between Nifty-50 and exports of India is insignificant as the value of pearson-coefficient-correlation is .695 which is significant at 0. Therefore it is suggested that Nifty-50 and exports are not associated. In the same way correlation reported between Nifty-50 and imports of India is insignificant as the value of pearson-coefficient-correlation is .996 that should have significance at 0. Therefore it is suggested that Nifty-50 and imports are not associated.

The bivariate-correlation reported between GDP and inflation rates of India is significant in statistical terms as the value of pearson-coefficient-correlation is .140 that should have significance at .21%. Therefore it is suggested that there is a negative correlation reported between GDP and inflation. Likewise correlation reported between GDP and interest rates of India is significant in statistical terms as the value of pearsons-coefficient-correlations is -.064 that should have significance at 0%. Therefore it is suggested that there is negative correlation among GDP and interests rates. Similarly correlation reported between GDP and Industrial

Production of India is significant in statistical terms as the value of pearsons-coefficient-correlations is -0.551 that should have significance at 0%. Therefore it is suggested that there is negative-correlation among GDP and Industrial Production. Likewise correlation reported between GDP and Money Supply of India is insignificant statistical terms as the value of pearsons-coefficient-correlations is 0.135 that should have significance at 23%. Therefore it is suggested that GDP and Money Supply are not assosiated. In the same way correlation reported between GDP and fiscal deficit of India is insignificant in statistical terms as the value of pearsons-coefficient-correlations is .029 that should have significance at 79%. Therefore it is suggested that GDP and fiscal deficit are not associated. Likewise correlation reported between GDP and exports of India is insignificant in statistical terms as the value of pearsons-coefficient-correlations is .254 that should have significance at 02%. Therefore it is suggested that GDP and exports are not associated. In the same way correlation reported between GDP and imports of India is insignificant in statistical terms as the values of pearsons-coefficient-correlation is .384 that should have significance at 0. Therefore it is suggested that GDP & imports are not associated.

The bivariate correlation reported between inflation and interest rates of India is insignificant in statistical terms as the values of pearsons-coefficient-correlations is -.027 that should have significance at 81%. Therefore it is suggested that inflations and interest rates are negatively correlated. Similarly correlation reported between inflation and industrial productions growth rates of India is significant in statistical terms as the values of pearsons-coefficient-correlations is -0.002 that should have significance at 98%. Therefore it is suggested that inflation and industrial-productions-growth-rates are negatively correlated. Likewise correlation reported between inflation and money supply of India insignificant in statistical terms as the value of pearsons-coefficient-correlations is 0.054 that should have significance at 63%. Therefore it is suggested that inflation and money supply are not associated. In the same way correlation reported between inflation and fiscal deficit of India is insignificant in statistical terms as the valuse of pearsons-coefficient-correlations is .127 that should have significance at 26%.therefore it is suggested that inflations and fiscal deficits are not associated. Likewise correlation reported

between inflation and exports of India is insignificant in statistical terms as the values of pearsons-coefficient-correlations is .114 that should have significance at 31%. Therefore it is suggested that inflation & exports are not associated. In the same way correlation reported between inflation and imports of India is insignificant in statistical terms as the values of pearsons-coefficient-correlations is .147 that should have significance at 19%. Therefore it is suggested that inflation & imports are not associated.

The bi-variate correlations among interests rates and industrial-productions-growth-rates of India is significant in statistical terms as the values of pearsons-coefficient-correlations is -0.029 that should have significance at 80%. Therefore it is suggested that interest & industrial-productions-growth-rates are negatively correlated. Likewise correlation reported between interest and money supply of India is significant in statistical terms as the values of pearsons-coefficient-correlations is -.703 that should have significance at 0%. Therefore it is suggested that interest & money supply are negatively correlated. In the same way correlation reported between interest and fiscal deficit of India is significant in statistical terms as the values of pearsons-coefficient-correlations is -.108 that should have significance at 33%. Therefore it is suggested that interest & fiscal deficit are negatively correlated. Likewise correlation reported between interest and exports of India is significant in statistical terms as the values of pearsons-coefficien-correlations is -.136 that should have significance at 22%. Therefore it is suggested that interest & exports are negatively correlated. In the same way correlation reported between interest and imports of India is significant in statistical terms as the values of pearsons-coefficient-correlations is -.202 that should have significance at 7%. Therefore it is suggested that interest & imports are negatively correlated.

The bivariate correlation reported between industrial-productions-growth rates and money supply of India is insignificant in statistical terms as the values of pearsons-coefficient-correlations is .068 that should have significance at 54%. Therefore it is suggested that industrial-productions-growth-rates & money supply are not associated. In the same way correlation reported between industrial-productions-growth-rates & fiscal deficit of India is insignificant in statistical terms as the values of pearsons-coefficient-correlations is .197 that should have significance at 8%. Therefore it is suggested that industrial-productions-growth-rates & fiscal deficit are not associated. Likewise correlation reported between industrial-

productions-growth-rates & exports of India is insignificant in statistical terms as the values of pearsons-coefficient-correlations is .109 that should have significance at 33%. Therefore it is suggested that industrial-productions-growth-rates & exports are not associated. In the same way correlation reported between industrial-productions-growth-rates & imports of India is insignificant in statistical terms as the values of pearsons-coefficient-correlations is .184 that should have significance at 10%. Therefore it is suggested that industrial-productions-growth-rates & imports are not associated.

The bivariate correlation reported between money supply and fiscal deficit of India is insignificant in statistical terms as the values of pearsons-coefficient-correlations is .245 that should have significance at .02%. Therefore it is suggested that money supply and fiscal deficit are not associated. Likewise correlation reported between money supply and exports of India is insignificant in statistical terms as the values of pearsons-coefficient-correlations is .235 that should have significance at 3%. Therefore it is suggested that supply of money and exports does not have any association. In the same way correlation reported between money supply and imports of India is insignificant in statistical terms as the values of pearsons-coefficient-correlations is.351 that should have significance at 0%. Therefore it is suggested that money supply and exports are not associated.

The bivariate correlation reported between fiscal deficit and exports of India is insignificant in statistical terms as the values of pearsons-coefficient-correlations is .733 that should have significance at 0%. Therefore it is suggested that fiscal deficit and exports are not associated. In the same way correlation reported between fiscal deficit and imports of India is insignificant in statistical terms as the values of pearsons-coefficient-correlations is .510 that should have significance at 0%. Therefore it is suggested that fiscal deficit & exports are not associated.

The bivariate correlation reported between exports and imports of India is insignificant in statistical terms as the values of pearsons-coefficient-correlations is .686 that should have significance at 0%. Therefore it is suggested that exports & imports are not associated.

The bivariate correlation has been calculated on quarterly index of nifty-50 and selected macro economic variables for the period 2000-2019. The Bivariate correlation has been calculated between the nifty 50 indexv and macro economic variables which are gdp, inflation rate, interest rate, industrial production growth rate, money supply, fiscal deficit, exports and imports. To analyze the results the three limits of correlation coefficient have been considered. These limits are +,-0 to +,-.25(low correlation), +,-.25 to +,-.75 (moderate correlation) and +,-.75 to+,-1(high correlation). If the values of correlation falls under first limit i.e +,-0 to +,-.25, it indicates share prices are not correlated much with the factors of the economy. If the value of correlation falls under the second limit i.e +,-25 to +,-75, it indicates that share prices are moderately correlated with macro economic factors of the Indian economy and if share prices falls under third limit i.e +,-.75 to+,-1, it indicates that nifty 50 index is highly correlated with the selected macro economic factors of the Indian economy.

5.3 Granger Causality Test

Granger Causality

The causality relations is analyzed in the study is applied through granger causality test proposed by Granger(1969). The rigorous statistical technique purporting to detect the nature of causality between two variables, say, X and Y. the idea is that if X (Granger) causes Y, then the changes in X should precede changes in Y since the future cannot predict the past. Therefore, in a regression of Y on the other variable (including its own past values) if one includes past or lagged values of X and it significantly improves the prediction of Y, then one can say that X(Granger) causes Y. if X causes Y, but Y does not cause X, or the other way around, then the causal relationship between X and Y is unidirectional. In case X causes Y and Y also causes X, we say the causal relationship is- bidirectional.

STATIONARITY

It is worth noting that application of the Granger causality test requires the time series of the concerned variables, X and Y, to be stationary, which means that, loosely speaking, the mean and variance of each variable do not vary systematically over time. It has been shown that using non stationary data in causality test can yield spurious causality results (Granger and Newbold, 1974; Stock and Watson, 1989). Thus it is necessary to examine whether the time series of the variables, X_t and Y_t, are stationary or not before taking the causality test.

If the variables involved are found stationary, then conventional Granger-causality test can be applied. In case they are found nonstationary, they ought to be transformed into stationary series by successive differencing until the differenced series become stationary and then apply the causality test with the differenced stationary data. In this study, the augmented Dickey-Fuller (ADF) stationarity test is used to test for the presence of unit root in the original and differenced time series of the variables to ascertain the required stationarity.

Granger-Causality Test

Based on the results from stationarity, Granger-causality test can be carried out as follows. If the results from statonarity test show that the two variables X and Y are stationary, then the standard Granger-Causality test should be applied. And so the dynamics of any linkages is analysed by the use of Granger Causality test. As the concept of Granger-causes another tome series y_t if series y_t can be predicted with the improved correctness with the use of previous value of x_t rather then by not doing so, other information being similar. It can also be said in different terms as, variables x_t fails to granger cause y_t if

$Pr(Y_{t+m} \mid \Omega_t) = Pr(Y_{t+m} \mid \dot{\varphi}_t)$

Where $Pr(y_{t+m} \mid \Omega_t)$ denotes conditional probability of y_t, where Ω_t is the set of all information's accessible at time t, and $Pr(y_{t+m} \mid \dot{\varphi}_t)$ denotes conditional probability of Y_t obtain by the exclusion of all information's on X_t from Y_t. this set of information is depicted as $\dot{\varphi}_t$. The causal linkages among share price and macro-factors for Indian economy are analyseded by using the techniques of Granger-causality-test.

DEFINITION

Assuming to have an information set Ω_t with the form ($x_{t,\ldots..Xt-j,}$ $y_{t,\ldots.yt-i}$), we say that x_t is granger causal for Y_t wrt Ω_t if the variance of the optimal linear predictor of Y_{t+h} ,based on Ω_t has smaller variance than the optimal linear predictor of Y_{t+h} based only on the lagged values of Y_t, for any h. Thus, x Granger-causes Y if and only if $\sigma_1^2(\text{Yt} : \text{Yt} - \text{j}, X_{t-i}) < \sigma_1^2(\text{Yt} : \text{Yt} - \text{j})$, with j and i 1,2,3…..n and σ^2 representing the variance ofd the forecast error.

There are three different types of situation in which Granger-causality test can be applied :

- In a simple Granger-causality test there are two variables and their lags.
- In a multivariate Granger causality test more than two variables are included, because it is supposed that more than one variable can influence the results.
- Finally Granger-causality can be tested in a VAR framework, in this case multivariate models extended in order to test for the simultaneity of all the variables.

The empirical results presented in this study are calculated within a simple Granger causality test in order to test whether Macro Economic factors of the economy "Granger cause" stock price movement and vice versa. Thus according to Madhavi & Sohrabian(1989), the following two equations can be specified

$$(GDP)_t = \alpha + \sum_{i=1}^{m} \beta (GDP)_{t-1} + \sum_{j=1}^{n} \tau (sp)_{t-j} + \mu_t \quad (1)$$

$$(sp)_t = \theta + \sum_{i=1}^{p} \emptyset_i (sp)_{t-1} + \sum_{j=1}^{q} \cup_j (GDP)_{t-j} + \vartheta_t \quad (2)$$

Based on the estimated OLS coefficients for the equations (1) and(2) four different hypothesis about the relationship between macro economic factors of the economy and stock market returns can be formulated :

1. Unidirectional Granger-causality from stock market returns to factors of the economy. In this case stock price increase the prediction of the economy but not vice versa.

2. Unidirectional Granger causality from factors of the economy to stock market returns. In this case the factors of the economy increases the prediction of the stock prices but not vice versa.

3. Bidirectional (orv feedback) causality. In this case factors of the economy increases the prediction of the stock prices and vice versa.

4. Independence between the factors of the economy and stock market returns. In this case there is no granger causality in any direction.

Hence by obtaining one of these results it seems possible to detect the causality relationship between stock prices and macro economic factors of Indian economy.

Now since the series are covariance stationary we can proceed to checking f or the number of lags. The Granger causality test is sensitive and it is therefore important to choose and information criterion to base the decision on the number of lags to apply to the series in the regression to follow. For this purpose we have analyzed a large range of lags. Many previous works use the criterions of Akaike and Schwarz to formulate these choices. The results are presented in the tables given below.

Table : 3.1

Granger Causality Test

Hypothesis	**Direction Of Causality (Null Hypothesis)**	**Lag**	**F**	**P**	**Remark**	**Conclusion**
Hypothesis1	DDGDP does not Granger cause DDNIFTY	2	1.6697	0.8466	Accepted	GDP has caused Nifty
Hypothesis2	DDGDP does not Granger cause Dstock		6.59459	0.0024	Rejected	
Hypothesis1	DMoney Supply does not Granger cause DDNifty	2	5.17981	0.0011	Rejected	Money supply has caused Nifty
Hypothesis2	DDIndprod does not Granger cause DStock		0.75610	0.5576	Accepted	
Hypothesis1	DDImports does not Granger cause DDNifty	2	6.9803	0.0022	Accepted	Imports has caused Nifty
Hypothesis2	DDNifty does not Granger cause		3.16158	0.0584	Rejected	

	DImports					
Hypothesis1	DDExports does not Granger cause DDNifty	2	5.22103	0.0077	Rejected	Export has caused Nifty
Hypothesis2	DDNifty does not Granger cause DDExports		0.13944	0.8701	Accepted	
Hypothesis1	DDInterest Ratedoes not Granger cause DDNifty	2	0.23985	0.7874	Accepted	Nifty caused Interest rates
Hypothesis2	DDNifty does not Granger cause DDInterest		4.44676	0.0152	Rejected	

The result presented in the above table shows that out of the selected eight macro economic variables and Nifty only five have showed causality. As we can see from the above table that GDP has caused Nifty as the probability value is 0.0024 which is less than 0.05%. So the hypothesis $H_2$is rejected and it can be stated that GDP caused Nifty-50 whereas Nifty-50 didn't caused GDP as there is unidirectional causality. In the same way money supply has caused nifty as the probability value is 0.0011 which is less than 0.05%. So the hypothesis H_1 is rejected and it can be stated that money supply has caused Nifty-50 whereas Nifty-50 didn't caused money supply as there is unidirectional causality. The results showed that imports has caused nifty as the probability value is 0.0022which is less than 0.05%. So the hypothesis H_2 is rejected and it can be stated that imports has caused Nifty-50 whereas Nifty-50 didn't caused imports whereas Nifty-50 didn't caused imports as there is unidirectional causality. Exports has caused nifty as the probability value is 0.0077 which is less than 0.05%. So the hypothesis H_1 is rejected and it can be stated that exports has caused Nifty while there is no causality from nifty to exports as there is unidirectional causality. The results showed that nifty has caused interest rates as the probability value is 0.0152 which is less than 0.05%. So the hypothesis H_2 is rejected and it can be stated that nifty has caused interest while there is no causality from interest to nifty as there is unidirectional causality.

5.4 Regression

Linear Regression

To study the cause and effect relationship the linear regression was used because Daper and Smith(1981) stated that for the understanding of advanced forms of statistical models, simple linear regression model has to be understood as it serve as a path to understand them. Various core concept of simple linear regression forms the very basis to understand multiple regressions viz. multiple regressions, factor analysis, time series etc. It can be understood as a versatile modeling techniques. It is also known as versatile technique. Simple linear regression can be applied for modeling curvilinear data by the transformation of raw data especially logarithmic or power transformation. For using it as simple linear regressions the data is transformed into linear data. Results of the linear modeling will express it as linear formulae which is related to the transformed value. This is because dependent variable linearity on their unknown parameters are easier to fit then then the models which non linearly relate to their parameters. Further the statistical properties of resulting estimators are easier to determine in linear regression and this type of regression is used extensively in practical applications. Before selecting a more complex model one should first consider if a transformation of data might enable a simpler one to be used (Daper and Smith 1981). As O'Byrne (1996), Biddle et al., (1997 and 1999) has earlier appled linear regression in similar situations and have demonstrated the applicability of linear relationship between stock return and macro economic factors.

The most known & common technique of modeling is linear least square method. Data with any function can be fit in it. In this technique the unidentified parameters are identified by minimization of the total of square deviation among data & model. This minimizing process reduces the over determined system of equation formed by the data of sensible system of p(where p is the number of parameters in the functional part of the model) equations in $_p$ unknowns. This new systems of equations is solved to obtain the parameters estimates.

For the suggested equation, method of least square is applied for regression. Below given table shows the result of least square.

Least square method is used to do regression for the proposed equation. The results of the least square regression can be seen from the table below. Moreover, the hetroscedasticity issues from the proposed model is fulfilled with the use of white methods which is done by Eviews software. This method is known as hetroscedasticity correct variance.

Table 4.1

Table showing Comparitive Analysis of Beta Values of Linear Regression Between Nifty and Macro Economic Factors Of the Indian Economy

Dependent Variable: DDNIFTY
Method: Least Squares
Date: 12/03/19 Time: 09:51
Sample (adjusted): 3 80
Included observations: 78 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.013656	0.013841	0.986658	0.3273
DDGDP	0.050954	0.024447	2.084286	0.0408
DMONEYSUPPLY	0.031637	0.031126	3.228102	0.0019
DDINFLATION	0.016653	0.006437	2.586969	0.0118
DDIMPORTS	0.409087	0.138287	2.958240	0.0042
DEXPORT	-0.526065	0.200977	-2.617538	0.0109
DDINDPROD	-0.006366	0.007870	-0.808939	0.4213
DFISCALDEFICIT	-0.218756	0.136293	-1.605039	0.1131
DDINTEREST	-0.017246	0.021050	-0.819296	0.4154

R-squared	0.431246	Mean dependent var	-0.000183
Adjusted R-squared	0.365303	S.D. dependent var	0.130251
S.E. of regression	0.103768	Akaike info criterion	-1.585150
Sum squared resid	0.742979	Schwarz criterion	-1.313222
Log likelihood	70.82086	Hannan-Quinn criter.	-1.476292
F-statistic	6.539722	Durbin-Watson stat	2.459552
Prob(F-statistic)	0.000003		

Model: $Y= a+b_{x1}+b_{x2} + b_{x3} +b_{x4} +b_{x5} +b_{x6} +b_{x7} +b_{x8}$, se

Nifty 50= C + GDP+ Mon Supp + Inf + Imp + Exp +Ind Prod + Fisc Def + Int, Se

(Dependent) (Independent)

Y= Nifty 50 (Dependent Variable)

a = Constant

bx_1= GDP (Independent Variable)

bx_2 = Money Supply (Independent Variable)

bx_3= Inflation (Independent Variable)

bx_4 = Imports (Independent Variable)

bx_5 = Exports (Independent Variable)

bx_6 = Industrial Production (Independent Variable)

bx_7 = Fiscal Deficit (Independent Variable)

bx_8 = Interest (Independent Variable)

Se = Standard Error

From the regression output, it was found that out of the selected eight macro economic variables five independent variables are significant in affecting Nifty- 50 (dependent variable), volatility namely gdp, money supply, inflation, imports and exports. This is indicated by the above table as the for GDP($\beta = 0.050954$, $t = 2.084286$, $p = 0.0408 < 0.05$) there is a significant positive impact of GDP on Nifty 50. Similarly for money supply ($\beta = 0.031637$, $t = 3.228102$, $p = 0.0019 < 0.05$) there is a significant positive impact of money supply on index of nifty 50. The results indicated that inflation ($\beta = 0.016653$, $t = 2.586969$, $p = 0.0118 < 0.05$) has significant positive impact on the index of nifty-50. For import ($\beta = 0.409087$, $t = 2.958240$, $p = 0.0042 < 0.05$) there is a significant positive impact of import on index of nifty-50. Similarly for exports ($\beta = -0.526065$, $t = -2.617538$, $p = 0.0109 < 0.05$). as the value of t statistic for gdp, money supply, inflation, import and export is 2.084286,3.228102, 2.586969, 2.958240 and -2.617538 respectively. The value indicate that whether independent variables should be included in a model for 95% confidence level. Or in other words the research tolerates only 5% chance that a particular independent variable does not belong to a model. Accordingly, a value of t statistic which is greater than 1.98 (if the coefficient is positive) or less than -1.98 (if the coefficient is negative) will be considered to be significant statistically. The other macro-factors like industrial productions growth rate, fiscal deficits and interest does not significantly affect index of nifty 50. The predictive variables of the model explains a formidable 43.1% of variation (R square=0.431) of nifty 50 index. F statistic of the model is 0.000003 which is significant at 5% level of significance, value of Durbin Watson is 2.4 which is near by 2. This means the problem of serial correlation does not affect our model.

CHAPTER-6
DISCUSSION AND FINDINGS

6.1 Discussion

This research work set out to evaluate the effect of selected macro-factors on capital market. In the light of the purposes of the study with agency theory (and to some less extent transaction cost economics), question is whether the macro economic variables correlate positively among themselves and with nifty-50 index for the period 2000-2019. As considerable body of evidence exists on possible correlation between various macro economic variables and capital market, correlation test was applied between selected macro-factors (GDP, Inflation. Interests Rates, Industrial-Production-Growth-Rate, Money Supply, Fiscal Deficit, Exports, Imports). The bivariate correlation of selected macro-factors of the economy reported negative and statistically insignificant relationship amongst them. The bivariate correlation test was applied between major factors of the economy and index of nifty-50. The bivariate correlation of selected macro economic factors of India and nifty-50 index reported that GDPand index of nifty 50 are moderately correlated. This seems to agree with the findings of Levine and Zervos (1996a, b) who found that positive correlation between the capital markets developments & long-term economic growths but only with the control of basic levels of per capita gross domestic product.

Further the relationship between inflation and nifty 50 index is positive and statistically significant as inflation is moderately correlated with companies listed in BSE-100. This is in line with the finding of Firth(1979) , Maysami(2004) , Adam & Tweneboah(2008) has reported a significant linear relations among inflations (CPI) & share returns. SimilarlyMontel (1989) analysed that as it is believed that increasing inflation gives advantage to normal stocks since increase in rates of inflations increase the return to share holders as the price of the share increases fast then wages rate. The relations expected among rates of inflations & return to shareholders will be effective if the trading firm was debtor & if the rates of interests on debts fails to show the change in future price levels.

The bivariate correlation between interest rates and nifty 50 index is positive and statistically significant also but interest rates are very weekly correlated with the nifty 50 index.

However there are some researchers whose results are dissimilar with the results of this study. They said that there exists negative relations between stock returns and inflation.

Even Fama (1981) observed that share return and inflations are negatively related for the period beyond 1953 due to the consequences of proxy effect. Share returns and inflations are tempted by negative relation among inflations & real activities. In the same way Saunders and Tress (1981) indicated that share price return and inflations rate for the economy of Australia are negatively associated which implies that share are not a good tool to hedge inflation by the investors

The bivariate correlation between industrial production growth rate and Nifty-50 is positive and statistically significant but industrial production growth rate is very weekly correlated with the nifty 50 index. This is similar to the findings of Chen (1986) found that industrial production is an important factor for the explanations of share returns.

Some researchers have reported dissimilar results even Pethe (2000) analysed that there is no kind of longrun, constant relations among the share price and economy which is macro in nature.

The bivariate correlation between fiscal deficit and Nifty-50 is positive and statistically significant as fiscal deficit is moderately correlated with nifty 50index. The results of the study are in line with Udegbunam and Eriki (2001) work. The finding showed that fiscal deficit have very negligible impact on the stock market.

The bivariate correlation between money supply and Nifty-50 is positive and statistically significant but money supply is weekly correlated with the index of nifty- 50.Chung and Shin (1999) analysed the macro-factors for understanding the share market of Korea. Share market index was significantly correlated with trade balance. Similar results were found by Kwon(1999).

Further, the findings as per the granger causality tests was that out of the selected eight macro-factors that is GDP, inflation, interest rates, industrial production growth rate, fiscal deficit, money supply, exports and imports. Out of these factors only five factors (gdp, money supply, imports, exports and interest) has granger caused in stocks returns volatility. And inflation, industrial production growth rates and fiscal deficit has not granger caused stock returns volatility.

In the same way Patra(2006) analysed by using various statistics like Granger-casuality statistcs for 1990-1999. Various factors were considered and the findings revealed that factors like supply of money, rates of inflations, volumes of trade have shorter-run and longer-run relations with Athen's share price, rate of exchange. The findings revealed that as the facts about macro-factors are known to everyone so the stocks exchange of Athen is not effective and efficient. Volume of trade may be used to predict the price of shares.

Similar results were obtained by Gan (2006) who examine the relations among New Zealand Stock Index (NZSE40) and macro economic variable for the period 1990-2003. Granger-Causality test, was applied on 157 monthly observation for every factor. Macro economic variables truly describe the New Zealand's Stock Indices (NZSE40). His findings also suggest that macro economic variables does not act as a lead indicator of New Zealand's stock indices.

However Beltratia and Morana (2006) indicates the dual linkages among share markets & macro-factors volatilities. They have suggested a distinct change in monetary policies, interests rate, growth in money supply can help in breaking the volatilities in share return and so can explain the levels & jump in volatility. Share markets volatilities can also influence the macro-factors volatilities as the causal relations is strong from macro-factors to share markets volatilities.

Shahid Ahmed (2008) analysed the effect of causal-relationship among share price and selected macro economic variable that represents real & financial sector for the economy of India by considering the quarterly data from 1995-2007. The factors considered were- industrial-productions-indices, export, foreign-direct-investments, supply of money, rates of exchanges,

rates of interests, NSE Nifty and BSE Sensex of India. For analyzing long run relationship granger causality test was applied. The findings suggested that there exist differential causal links among macro-factors and share price index in the long-term. The findings indicated that share price in India leads to economic activities apart from the movements in the interests rates. Price of the stocks are driven by the rates of interests. The study indicated that not only the real performances drives the share market of India but also the future expectations about the performances also drives the share market of India. The findings suggested that the movements of the share price is not only the result of macro factors but it seems to be one of the causes of the movements in other macro-dimension of the economy.

Similarly Shahbaz (2008) employed Granger Causality tests were applied to discover the strong relations among economic development and share markets growth. Granger-causality statistics provide the proof that the bi-direction causality exists among the share markets developments and economic growths to assure long-term relations. Although, a short-term indirection causality exist among share markets growths to economic developments which indicate that share markets growth is significant wheels for economic development. The results of regression statistics indicate that various factors like gross domestic product, import, export, rates of inflation and supply of money best indicate the share markets volatilities. From amongst the various factors supply of money has a big part to play as it affect the stock market volatilities the most during the period of demonetizations than import follows it after that export after that rate of inflations and finally gross domestic product follows it. The study also reveals that rate of interest, fiscal deficit, industrial productions do not affect the share markets fluctuations.

These result are contradicting to the findings of BanerjeArindam & Ali Mohammed Anwer (2006) who analysed the relations among developments (financially) and growths (economically) To test the hypothesis; they plotted the yearly growth in the GDP (Economy) and the Dow Jones Industrial Average in the American Market.)They concluded that stock markets act as an indicator of economic growth. Their findings are in line with the Dimson, Marsh and Staunton who suggested that corporate profit doesn't not represents a constant share of Gross Domestic Product. They found that high (low) rates of real GDP growth do not result in high (low) stock

returns. Further the regression analysis indicated that GDP and imports are the superior indicator of stock market volatility followed by industrial production growth rate and then by inflation and trade balance. Tarika Singh, Seema Mehta and M. S. Varsha (2010) similarly observed that the casual relations among index return and certain important macro-factors findings suggested that rate of exchange and gross domestic product effect return of all stock portfolios.

This result are contradicting to the findings of Banerjee Arindam and Ali Mohammed Anwer(2006) who examined the relationship between financial development and economic growth .To test the hypothesis; they plotted the yearly growth in the GDP (Economy) and the Dow Jones Industrial Average in the American Market.)The results revealed that the share market reveals that weather the share market is growing or not. Their findings are in line with the Dimson, Marsh and Staunton who suggested that corporate profit doesn't represents constant share of Gross Domestic Products. They found that high (low) rates of real GDP growth do not result in high (low) stock returns.

Similarly K. Malarvizhi, Dr. R. Thenmozhi, Dr. M. Jaya (2010) focusses from many factors to the movements of gross domestic product as it is the most significant factor as it play very important role. They concluded that changes in GDP affects stock market. Likewise it was reported in InternationalResearch Journal of Finances & Economic - Issue 25 (2009) suggest the change in share price will decrease the firms assets position & will influence the borrowing's cost. If the cost of borrowing money is high then the amount of borrowings and investments reduces and therefore the rate of growths of real gross domestic product reduces. Any changes in information's regarding upcoming rates of real gross domestic product will causes price level change in capital market. Though the explanations given suggest that price of the share is use to understand the activities of an economy in future but actually the rates gross domestic product in future causes share price in the present situation.

As the regression analysis reported that inflation have an important influence on the stock market volatility and is responsible for stock price movement as the regression results showed that inflation has an impact on nifty-50 volatility. Firth(1979), Maysami(2004), Adam & Tweneboah(2008) similarly observed and reported linear relations among inflations & share

return. The findings of this study is contradicting with the various empirical results that has revealed negative relations among share return & inflations.

This is similar to the findings of Abdulla (1993) who reported that growth in stocks have positive relations with inflation. The result are contradicting to the findings of Mohammad Bayezid Ali (2011) who on the basis of regression coefficient found that inflation and negative influence on stock market. This result are contradicting to the findings of Sharpe (2002) who has investigated the influence of share valuation and the expectations of the returns in the long term. His findings suggested that there was negative relations among the growths in return and inflations.

Regression analysis reported that interests has no influence on share market volatility and is not responsible for sock price movement as the regression result showed that interests have no important influence on the index of nifty 50 volatility. The findings are in line with Kandir (2008) who considered the monthly prices for the periods between 1997-2005 and applied regression statistics. The result revealed that there is no impact of interests rate on share prices. Similarly observations also suggest that rates of interests for the economy of Nigeria will impact considerably the holdings of financial assets by investor. Therefore it can be said that if ralations of any kind exist, it should always be expected to have negative associations among rate of interest and change in levels of share price. Similar results of Humpe and Macmillan (2007) examine whether the rate of interests have any impact on share price in Japan & United States. They proposed that rate of interests have negative relations with US Share markets volatilities.

This result are contradicting to the findings of Ali, Norli (2001) who inestigated that whether the changes in Malaysian interest rates can explain its stock price variability. The results indicated that interest rates is the dominant factors in determining portfolio returns. Similarly Muhammad Akbar, Shahid Ali, Muhammad Faisal Khan(2012) examined the relations among indices of Karachi stocks exchange & macro-factors relations among KSE-100 indices & macro factors including interest rates over from 1999-2008. The findings reveals that share price have linear relations with rate of interests.

Regression analysis reported that industrial production growth rate has no important influence on the share market volatility and is not responsible for stock price movement as the regression result showed that industrial production growth rate has no significant impact on the index of nifty 50 volatility. The results are contradicting with the past results carried out byChen (1986) who found that future markets share return can be predicted by industrial production growth rate. Shahid Ahmed (2008)investigated casual linkages among the share prices and macro-factors that represents the actual & the financial sector of India from 1995-2007 considering the quarterly observations. The findings suggested that the share market of India moves or fluctuates not just by the real performances but also by the expected performance. The results suggested that movements of share price was not just the result of macro-factors but it is amongst one of the cause of the movements in other macro dimensions in the economies.

Regression analysis reported that fiscal deficit has no significant impact on the stock market volatility and is not responsible for stock price movement as the regression result showed thafiscal deficit has no significant impact on the index of nifty 50 volatility. The same results were obtained by Udegbunam and Eriki (2001) who studied to unravel and find out the kind relations among the economic-factors and the capital market of India. For understanding and revealing the type of influence the selected factors will have on the sensitivity of Bombay stock exchange they considered supply of money, national output, rate of exchange, fiscal deficit, foreign institutional investment, fiscal deficit, rate of exchange and rate of interest in Indian market for the period 1994 to 2003. Their findings suggested that fiscal deficit has considerably less amount of effect on share market. However Agenor (2000) findings suggested that huge fiscal deficits is often prime symptom of macro economic instabilities that constraints private sectors investments & saving and therefore result in unproductive chanellization of resource on the exchanges that affect the performances.

Regression analysis reported that supply of money has significant influence on the share market volatility and responsible for stock price movement as the regression result showed that money supply has considerable significant impact on the index of nifty 50 volatility. The results were in line with Husain, Mahmood (1999), applied cointegration among share price & supply of money(M1, M2). The results revealed that there exists a linear relation among macro-factor as

also suggested by Hanousek, Filler (2000) has also given confirmation regardinglinear relation among supply of money and share price for Europe for the period 1993 to 1996. Linear relations and among supply of money and share price for Uniterd States is also revealed by Maskay (2007) and Flannery, Protopapadakis (2001), Poiré (2000) in their concerned study's respectively. Similarly Habibullah, Baharumshah (1996) analysed the stock market of United States and found a positive impact of Supply of money over share price. As also revealed by Malliaris, Urrutia (1991), Mookerje (1987) and Jeng, et al. (1990). In the same way Husain, Mahmood (1999), Rozeff (1974) suggested that the United States capital markets is effective in relations with supply of money, whereas Kraft, Kraft (1977) did not find any causal relations among share return and change in supply of money.

Regression analysis reported that imports and exports have significant impact on the stock market volatility and is responsible for stock price movement as the regression result showed that imports and exports have considerable significant impact on the nifty 50 index volatility. The results are in line with Ibrahim(2003) who studied Malaysian economy and share market volatility. The co-movements of share market of Malaysia with United States and Japan Market was also found. As the two significant business partners of Malaysia is United States and Japan and so Malaysia is dependent upon them for its export and import. The findings revealed that although Malaysia's economy is mostly concerned about exports but then also it is dependent on import to a great extent.

6.2 Findings

1. The findings reveals that out of the selected eight macro economic factors of the economy which are GDP, inflation, interest rates, industrial production growth rate, fiscal deficit, money supply, exports and imports, the factors that affected the most, the index of nifty 50 are money supply, GDP, inflation, imports and exports. So the first important finding is interest rate, fiscal deficit and industrial production growth rate does not affect stock market volatility.

2. Another important finding is that Indian share markets seem to move not only by real time performances but also because of the future performance that investors are expecting. The results reveal that the movements of share price is not just based on macro-factors but this is only one of the cause of movements in various new macro-dimension in an economy.

3. The Indian share market are one of the oldest and most developed markets in Asia, but still quiet underdeveloped. The Indian markets are still undervalued to some extent and has a lot of growth potential in the future.

4. The another important findings of this study is that the Indian financial markets are expanding at a very fast rate. Especially the capital market that is stock exchange in India are seeing tremendous growth in volumes, return and market capitalization. The total turnover of Bombay stock exchange is 1.42 lakh crore in 2012.

5. The another findings of the study is that Indian capital market has come out with various new and innovative instruments like futures, options, various types of mutual funds etc. in the last few years where investors can invest his money. This is one of the reasons in the growth in volumes, returns and market capitalization because when consumers get large variety of innovative products, they can invest in the respective products which suits their capacity of risk taking.

CHAPTER-7
SUGGESTIONS AND CONCLUSION

7.1 SUGGESTIONS

1. After conducting the research, it can be suggested to the investors who are investing in companies of Nifty 50 that they should conduct economic analysis prior to investing money in capital market.

2. The study has been done for twenty years (2000-2019) & considering the index of nifty 50 but for getting more appropriate result one can increase the sample size as well as the duration.

3. The further study can be done in this area to know the effect of factors other than GDP, interest rates, inflation,industrial production growth rate,fiscal deficit, money supply, exports and imports such as international influences, treasury bill rate, exchange rate of economy on index returns .

4. The research can also expand by collecting investor's responses towards various factors affecting index returns.

5. The study is limited to India so in future study can be extended to other countries also.

6. As the study is limited to National stock exchange, the conclusion that will be derived may or may not be used for other stock exchanges in India. Further study can be done on other stock exchanges of India.

7. It is suggested to the researchers that in the future studies tools other than used in this study can be used to check the efficiency level.

8. The study has considered only nifty 50 for the period 2000-2019. It is suggested to the researchers that further research can be done by considering other indexes in the analysis.

7.2 IMPLICATIONS

- It helps to determine that whether financial & economic climates are favorable and has the capability to encourage the development of business sector.
- It helps in knowing the corporate profits through economic activitiy.
- It helps in knowing the interaction of domestic economy with the other economies of the world.
- A scrutiny of the economic analysis by investors also helps them in the management of international portfolios.
- The behavior of the stock prices relative to the economic factors can be established and can be used by investor to select the right investments.
- Investors analyzes helps in both the micro and macro economic performance of the country represented by the stock market.
- Economic analyses establishes the relationship between the movement of consumer sentiment , real effects ,fiscal policy and influences on the long term as well as short term expectations on the stock market performance.

7.3 Conclusion

The beginning of the new millennium is remarked for capital market of India as the era of rapid growth and development. The first half of the second decade of the new millennium the Indian stock market showed some unprecedented growth. Till the first quarter of 2008 the market growth was phenomenal and everyone was expecting the market to grow at even at faster pace. With the BSE- SENSEX touched its all time high of 21000 points. But following the rapid growth came the era of great volatility. When market showed some of the steepest fall and lower circuit was applied on the entire market for three consecutive days. From 21000 points market fell to below 8000 point mark. This time is known as the worst time for the Indian markets and even after four years today, the market are still trying to recover from the shock.

In during this fall the investors and the experts of the stock markets trying to search for the reasons of such a rapid fall. The present study aims at studying the impact of macro economic factors on stock market volatility.

The study examined the relations among Indian capital market and a set of macro-economic variable for the period of 1999-2019. The time-series data set employed in the study comprises of quarterly observation of the Nifty-500, GDP, inflation, interest rates, industrial production growth rate, fiscal deficit, money supply, imports and exports. The objective of the research is to find out and study the causality among share markets & macro factors. Although there is a moderate correlation between the two . The study applied Augmented Dickey Fuller statistics data can be made stationary. The study applied correlation statistic to find out the kind of relations among the selected macro economic variables of the Indian economy and index of nifty 50. The study has also applied granger casuality test to determine the causal effect relations among index of nifty-50 and selected macro economic factors of the economy. Granger casusality test was carried out in order to find out whether there is potential predictability power of one indicator over the other. Statistical inferences are drawn from the data by means of significance test and unidirectional causality is seen between them. GDP, money supply, imports,

exports and interest do granger cause stock returns. While inflation, industrial production growth rate and fiscal deficit does not granger cause stock returns.

The study also used regression test to determine the cause and effect relationship, Statistical inferences are drawn from the data by means of significance test. And so according to the regression test, the macro economic factors that affected the most stock returns volatility are money supply, GDP, inflation, imports and exports And also amongst these five mentioned variables money supply and imports are the most important variables which are majorly responsible for stock returns volatility. Out of the selected eight macro economic variables three macro economic variables des not affect the stock returns volatility these variables are industrial production growth rate, fiscal deficit and interest.

7.4 Limitations of the Study

1. The study had used the time frame of 20 years i.e. from 1999-2019. The time period of the study can be extended. The longer the period of the study, the results can be stronger and can more justify the impact the of financial factors on the stock market.

2. Extend the focus of the study to include other macro-economic factors. This study has not considered various other factors that can also play an important role.

3. This study has considered the index of National Stock Exchange i.e. Nifty-50 only, and on that very basis influence of financial factors over capital market is found. So, the further study can be done by using other indices also.

4. The statistical tools which was applied to test the relations and impact of financial factors over stock market is Aukgmented Dickey Fuller test, regression, granger causality test, correlation by using econometric tool i.e. E-Views 9.5 version. Various other statistical tools can also be used.

5.As the study has focused on finding the influence of macro economic factors on stock market index, individual companies can also be considered and the impact on individual companies could also be found.

6. The study is limited to India so in future study can be extended to other countries also.

9. The research can also expand by collecting investor's responses towards various factors affecting index returns.

7.5 Future Recommendations

1. The study has been done for 20 years (1999-2019) for Nifty -50 index but for getting more appropriate results one can increase the sample size and duration as well.

2. The further study can be done in this area to know the effects of factors other than GDP, interest rates, inflation, industrial production growth rate, fiscal deficit, exports, imports and money supply.

3. The research can also be expanded by collecting investors responses towards various factors affecting index returns.

4. The study is limited to India only so in future it can be extended to other countries also.

5. Since the study is limited to National stock exchange, the conclusion drawn may or may not be used for other stock exchanges in India. Further study can be made on other stock exchanges of India.

6. It is suggested that in future tools other than those used in this study can be used to check the efficiency level.

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